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ABSTRACT

The sixth volume of a 10-volume report, this document provides an analytic history of dissemination at the National Institute of Education, focusing on six dissemination-related programs supported by the Institute: Educational Resources Information Center (ERIC), State Dissemination Capacity Building Program, Urban Sites/Documentation and Technical Assistance Program, Teachers' Centers Exchange, Research and Development Utilization Program, and Research and Development Exchange. The emergence, implementation, and (when possible) results of the six dissemination programs are described within the social and political context affecting the Institute's development and/or support of these programs. Analyses of the different interpretations of dissemination associated with each program and their relationship to research, practice, and the federal role in education run throughout the volume, providing the author's interpretation of the descriptive material. (TE)

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People, Policies, and Practices: Examining the Chain of School Improvement, Volume VI

Dissemination at the National Institute of Education: Contending Ideas about Research, Practice, and the Federal Role

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Volume VI

Dissemination at the National Institute of Education: Contending Ideas about Research, Practice, and the Federal Role

Charles L. Thompson

**A STUDY OF DISSEMINATION EFFORTS
SUPPORTING SCHOOL IMPROVEMENT**

**David P. Crandall, Ed.D.
Principal Investigator**

**The NETWORK, Inc.
Andover, Massachusetts**

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PREFACE

The Study of Dissemination Efforts Supporting School Improvement was a comprehensive, three-year examination of a broad spectrum of federal and state dissemination activities. It included a close look at selected strategies designed to improve schools by promoting the adoption and use of new educational practices developed with federal support. Sponsored by the Office of Planning and Evaluation of the U.S. Department of Education, the study was conducted by The NETWORK, Inc., in collaboration with several other research and development organizations, including the University of Texas' R&D Center for Teacher Education, the American University's Knowledge Transfer Institute, the Center for Policy Research and UCLA's Center for the Study of Evaluation.

The study examined four distinct levels of the educational system: federal, state, external agent, and local. A "zoom lens" design began with an overview of forty-five programs in the U.S. Department of Education that engaged in dissemination or dissemination-related activities. Fifteen of these programs were selected for in-depth analysis at the federal level. At the state level, we examined dissemination activities in ten states representative of the continental forty-eight.

Four strategies, each reflected in a selected federal program, were chosen for in-depth investigation at the local level. The strategies, and their programmatic exemplars, are:

- Interpersonal Linkage of Validated Practices, exemplified by the National Diffusion Network (NDN), including its ESEA Title I subnetwork
- Commercial Distribution, exemplified by the Bureau of Education for the Handicapped Marketing Program
- State Administration of Dissemination, exemplified by ESEA Title IV-C Adoption Grants
- Local Development/Invention, exemplified by ESEA Title IV-C Development Grants

A close look at 146 schools and school districts in the ten states, whose improvement efforts were supported by one of these programs, allowed us to answer three important questions:

1. To what extent are new practices supported by the federal programs being implemented in schools?
2. What factors influence successful implementation?
3. How are policies, conceived at one level, implemented at other levels?

Because three of the four programs chosen rely on implementing practices developed outside the local setting, we were interested in the vehicles employed by the programs for dissemination, particularly the assistance provided by external agencies and individuals.

Focusing-in the lens one more time, we conducted an intensive field study of twelve of our local sites over the course of a school year. Here, we were able to examine the interpersonal and organizational dynamics surrounding implementation as school people worked to incorporate innovative practices.

The study as a whole was a massive effort that required the energies and resources of countless people. Altogether, we:

- interviewed and surveyed over 5,000 educators;
- accumulated over 1500 hours of interview tapes;
- spent over 700 person-days "on the road;"
- made approximately 150 observations; and
- analyzed over 400 documents.

The three years were spent in design (Year 1), data collection (Years 1 and 2), and data analysis (Years 2 and 3).

The master report, People, Policies, and Practices: Examining the Chain of School Improvement, consists of ten volumes which describe the results of the study. Volume I (Setting the Stage for a Study of School Improvement) sets the study within a framework of federal school improvement policies and past studies of these policies. The objectives, design, and research methodologies used in the study are also described.

Volume II (Portraits of the Changes, the Players, and the Contexts) describes what was found in the 146 school districts that comprised our local site sample. Characteristics of the people, the innovations, and the settings are reported, as are the contributions of external assistance and the outcomes accrued from involvement in school improvement.

Volume III (Models of Change) introduces the causal models of the school improvement process that helped us determine what factors influenced success. The findings are reported for several outcomes at both the organizational (school) and individual (teacher) level.

In Volume IV (Innovation Up Close: A Field Study in Twelve School Settings), we examine the dynamics of twelve districts -- varying in experience with the new practices, in community type, and in the scope of their efforts -- involved in improvement efforts supported by the National Diffusion Network or ESEA Title IV-C

Local Development Grants. The volume provides an in-depth picture of the motivations, behaviors and aspirations of school people as new practices are implemented and maintained.

Volumes V, VI and VII analyze the government's role in dissemination for school improvement. In Volume V (Dissemination for School Improvement: An Analysis of Nine Federal Education Programs), we profile nine widely different federal programs sponsored by the then U.S. Office of Education. The volume examines the assumptions underlying the programs, and how these shaped each program's dissemination strategy.

In Volume VI (Dissemination at the National Institute of Education: Contending Ideas about Research, Practice, and the Federal Role), six federal dissemination programs funded by the NIE are examined. We tell the story of the programs' emergence, implementation, and -- to the degree possible -- impact, and discuss implications of the programs for the federal role in dissemination.

In Volume VII (Configuration of Federal and State Dissemination Activities), we present a comparative analysis of federal-state relationships for dissemination and school improvement in our ten sample states. We examine the impact of federal initiatives and other critical influences on the roles and operations of state education agencies.

Volume VIII (The Infrastructure of Innovation: The Case of the National Diffusion Network) examines the communication and rewards structure of a single federal program -- the National Diffusion Network. We examine the NDN as a decentralized service delivery system which has evolved to a grass-roots effort with greatly reduced dependence upon federal leaders for direction and control. Network analysis, based on a census of all members and adjuncts of the NDN, provides interesting insights into a unique federal program.

Volumes IX and X summarize our efforts. Volume IX (Implications for Action) integrates findings from all components of the study, and discusses implications for policy and practice at all levels of the educational enterprise. Volume X, our Executive Summary, provides a distillation of study methods and findings for a general audience, as well as an annotated bibliography of the report series and related study documents.

ACKNOWLEDGEMENTS

The Study of Dissemination Efforts Supporting School Improvement engaged literally a cast of thousands. At the peak of activity, it involved some 5,000 educators from all parts of the country, with a wide range of roles and responsibilities, whose only commonality was the desire to improve the education of our nation's youth. Although it is impossible to personally thank everyone, we pause here to acknowledge their important contributions.

Our Project Officer: Ann Bezdek Weinheimer, for her superb guidance and unending support;

Our Policy Advisory Group: Dave Clark, Ellie Farrar, Michael Fullan, Hendrik Gideonse, Egon Guba, Milbrey McLaughlin, David Wiley, and Ward Mason, for their help in conceptualization and design, and their thorough and honest feedback;

Our Senior Consultants: Jeff Eiseman, Gene Hall, Ann Lieberman, Matt Miles, and Bill Schmidt, for keeping us on track early in the study, and contributing substantively to design, analysis and reporting;

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Our NETWORK Support Team: Pat Bales, Margaret Broderick, Ronna Coppola, Kory Hellmer, Clif Lund-Rollins, Elsa Martz, Nancy Lund, Nick Thorkelson, Annmarie Lenson, and Ruth Anne Shepard who edited, typed, organized, copied, served, drew, retyped, collated, hustled, and cleaned up after us times too numerous to mention, for all of that and more;

And finally, to the people who other studies label "respondents" but whom we considered and related to as "collaborators": over 4,000 teachers, nearly 400 building and district administrators, 100 people in external assistance roles, 50 personnel in ten state departments of education and 100 federal program staff, for their dedication to making schools a better place for people, and helping us learn the good news:

SCHOOL IMPROVEMENT EFFORTS ARE ALIVE AND WELL
IN SCHOOLS ACROSS THE U.S.:

And, on a more personal note:

They said it couldn't be done; parts of it, yes. The whole humongous thing? No way! But we believed, we persevered, and we succeeded.

Managing (producing?) an enterprise of this scale and complexity was not unlike being entrusted with a string of race horses while also being expected to efficiently operate race tracks all over the country. One's charges must run, sometimes for practice, sometimes in claim races, sometimes for fun, and sometimes for substantial purses. At the tracks, stands must be cleaned, popcorn purchased, receipts counted, special events trumpeted, sound systems repaired. Oh yes, add to this the necessity of producing a comprehensive story of each season's successes (and failures), with appropriate statistical detail for the aficionados and photos for the occasional attendee. Perhaps such images will help you connect with the range of reactions I have had to this point, when all that remains of the season is the final manuscript which down-plays the thrills and recalls the tribulations.

Although flashes of Hercules and his labors in the stables come to mind, as do painful recollections of the occasional reluctance of the imported studs to perform as desired, and more than a few false breaks at the gate, overall I am immensely satisfied with both the process and the product of our collective odyssey. On balance, it was a frolic with a wonderful group of thoroughbreds.

All the players in our production performed admirably; their contributions were manifold. Three are worthy of special mention, one whose contribution was the necessary catalyst at the front-end, enabling our adventure to commence and continue; one whose firm hand kept us on our course; and another whose contribution at the back-end ensured the successful conclusion and chronicling of our journey with style and substance. My very special thanks to:

Ann Bezdek Weinheimer, whose courage in championing our unconventional approach launched us on our journey with confidence. During the study, Ann was our trailblazer and guide through the bureaucratic thickets. We benefited mightily from her detailed and hard-hitting critiques, her unwavering support for our efforts through the low moments and her praise at the high ones. Perhaps most of all, we treasure her belief in us and her infinite patience.

Joyce Bauchner, whose truly special ability moved us from abstract conception to earthly operation. Her commitment to task execution and consummate attention to detail served the study better than the best Master Sergeant. (Plus she's incredibly bright and doesn't smoke cigars.) Her formal titles and responsibilities belie the breadth and depth of her contribution to thinking up and working through this massive endeavor. As she remarked more than once, "Well, no one has ever done this before, but let's get on with it." And we did. My plans and our various teams' intentions, difficult as they were to arrive at, were just the first step. Seeing that they were carried out, by dispersed groups in six locations, on time and budget and in keeping with the overall conception was up to Joyce. Without her we'd still be picking up the stragglers and searching for the lost interview tape.

Susan Loucks, whose capacity for concentration, sustained high quality output and tolerance for my idiosyncracies is surpassed only by her unparalleled modesty, calm and good humor, is the single most important reason that the complex innovation of this study is represented through its master report series and numerous other publications. Individual authors have each made significant contributions in their own right. Weaving individual strands of reasoning into a coherent fabric that is both sturdy and stylish stands as the latest in a string of behind the scenes contributions that have been too often unacknowledged. Hers has been the longest and hardest race of all, because it's been run after the others have bedded down and the spectators have left the track. Had this been a race for the roses, the bouquet would belong to Susan.

Each has contributed in a special way to my realizing a major dream. From a field of exceptionally talented thoroughbreds, they have been a trio of true believers. Without these three, it wouldn't have happened; with them, I would try anything.

David P. Crandall, Ed. D.
Principal Investigator

SUMMARY: VOLUME VI

This volume provides an analytic history of dissemination at the National Institute of Education, focusing on six dissemination or dissemination-related programs supported by the Institute:

- Educational Resources Information Center (ERIC)
- State Dissemination Capacity Building Program
- Urban Sites/Documentation and Technical Assistance Program
- Teachers' Centers Exchange
- Research and Development Utilization Program
- Research and Development Exchange

As an analytic history, the volume provides both descriptive, factual information and the author's analysis of this information. The emergence, implementation, and (when possible) results of the six dissemination programs are described. This description is presented within the context of many of the related social and political factors which affected the Institute's development and/or support of these programs. An analysis of the development of the notion of dissemination at NIE as it relates to research, practice, and the federal role in education runs throughout the volume, providing the author's interpretation of the descriptive material.

Each program is analyzed to identify differing interpretations of dissemination as they relate to NIE's efforts to improve education through the application of research findings to educational practice. For example, ERIC is premised on the idea that educators will use research if it is easily accessible. In this case, dissemination is viewed as a technical problem of collecting abstracting indexing and making accessible research reports and articles. Other programs (e.g., State Dissemination Capacity Building Program, Research and Development Utilization Program, Research and Development Exchange) assume the necessity of interpersonal "linkages" or in-person assistance to mediate between practitioners and the information (research) base. Still other programs focus on developing local capabilities, e.g., improving the ability of schools to solve their own problems (Urban Sites/Documentation and Technical Assistance Program) and enhancing teachers' professional development (Teachers' Centers Exchange).

Among the conclusions about dissemination that are drawn from this analytic history are:

- Sustained assistance from "linkers" can enable local educators to make changes which they perceive to be beneficial, when this linker assistance is in the areas of

(a) establishing participatory problem-solving groups,
(b) defining and maintaining the focus on a problem,
(c) selecting or developing an appropriate innovation,
(d) training teachers, and (e) troubleshooting during
implementation.

- Passive dissemination systems are not sufficient to bring about the above mentioned changes. They are, however, useful sources of information concerning research, exemplary practices, and products of development.
- It is probably more effective to focus on problems experienced by people in schools than to focus on the school's organizational capabilities for self-improvement. (Although organizational characteristics appear to be crucial in determining the success or failure of interventions to improve practice, they are resistant to change through interventions relying solely on assistance. Attention to organizational structures and processes while focusing on specific problems appears helpful, however.)

Thompson also concludes that

research appears to have only weak appeal for most educational practitioners and to lack the power to change practice deeply or rapidly enough to satisfy most educational reformers research . . . suggests that "dissemination" . . . is more effective than the research being disseminated. (p. 212)

PRINCIPAL INVESTIGATOR'S FOREWORD

Dissemination at the National Institute of Education: Contending Ideas About Research, Practice, and the Federal Role is one of 10 major volumes completed by the Study of Dissemination Efforts Supporting School Improvement. The study examined federal strategies supporting schools' attempts to become more effective through the use of research and exemplary practices. This particular volume presents an analytic history of dissemination at the National Institute of Education, a federal agency with major responsibility for educational improvement. The author examines six of the Institute's major dissemination-related programs, describing their emergence, implementation, and -- where possible -- results. The programs are placed within the broader social and political context of NIE.

Charles Thompson provides the reader with far more than a factual presentation of descriptive material, however. His object is to provide an analytic history of these programs, analyzing the development of the notion of dissemination at NIE as it pertains to research, practice, and the federal role in education. Thus, throughout the volume Thompson interprets and analyzes the descriptive material as it is presented. Disagreements concerning his interpretation and analysis can, of course, arise. And, in fact, they have. The "dissemination problem," as Thompson refers to it, can be conceptualized in different ways and others may choose to interpret the "facts" presented here somewhat differently. That is the nature of analysis. And in this instance, Thompson's analytic history yields some new and thought-provoking insights into dissemination and its relationship to the National Institute of Education -- insights which can form the basis of informed discussion and policy-making. At the same time, the volume provides the reader with an enormous amount of descriptive information about the development of NIE's major dissemination-related programs. The two-fold outcome makes this work an important contribution.

David P. Crandall

AUTHOR'S FOREWORD

This is one of a series of volumes produced by the Study of Dissemination Efforts Supporting School Improvement. It focuses on six dissemination or dissemination-related programs supported by the National Institute of Education: (1) the Educational Resources Information Center, (2) the State Dissemination Capacity Building Program, (3) the Urban Sites/Documentation and Technical Assistance Program, (4) the Teachers' Centers Exchange, (5) the Research and Development Utilization Program, and (6) the Research and Development Exchange.

It should be emphasized that the six programs considered here do not represent anything like the sum total of NIE's dissemination activities. Over the ten years since the agency's founding, units all across the Institute have funded very diverse projects with significant dissemination components. These projects have employed a broad range of dissemination strategies and tactics. A study of selected projects' tacit or explicit dissemination "theories" and their corresponding activities would surely generate additional insights and help complete the reflections offered here. But as always, resources for this study were limited, and it was necessary to choose among the array of intriguing activities that might have been studied. It seemed wise to focus first on major programs representing different views about dissemination.

Also beyond the scope of this volume are the relationships between NIE dissemination programs and kindred programs in other parts of the Department of Education. These relationships led to the Dissemination Forums of 1977 and 1978, which brought together dissemination policymakers and professionals from all levels of the education system. Supporting and framing the dialogue among people concerned about dissemination was the Dissemination Analysis Group (DAG), organized and staffed by Jerry Fletcher of the office of the Assistant Secretary for Education. The DAG report, issued in January of 1977, contributed a deeper, more comprehensive, and more widely-accepted definition of dissemination than had been achieved to that time, adding the notions of support for rational choice, two-way exchange, and implementation to the conventional notion of dissemination as one-way spread of knowledge.

Within these limits, the volume is essentially an analytic history of dissemination at NIE. Historically, it tells the story of the six programs' emergence, implementation and -- to the degree possible -- results. Analytically, it uses this historical information to identify and interpret the ideas about research, practice, and the federal role in school improvement which underlay the programs and to derive from the programs' experience insights which may inform future policy and action at NIE. As is the case in all analytic efforts, the analysis presented is subject to dispute by those who perceive and interpret the historical "facts" differently.

One purpose of the volume is to supplement and shore up the federal government's exceedingly frail institutional memory. People enter and leave the government for a variety of personal and political reasons. Frequently those who leave take with them an impressive store of experience -- sometimes even wisdom. Too frequently, new people assume that nothing which went on before they came on the scene can possibly have much merit. Those who do recognize that one can learn something from past experience, even mistaken experience, have little access to it. To be sure, there are files. But the contents are usually dry as dust, and about as fragmented. One doesn't find the story of prior programs in the files -- only the facts.

I know about these things because I worked at NIE for four years, from 1974 until 1978. I worked in the Local Problem Solving unit -- the unit responsible for two of the programs examined here, Urban Sites/DTA and the Teachers' Centers Exchange. My personal experience at NIE is obviously both a blessing and a curse. A blessing because I know many of the people, events, and ideas appearing in this volume first-hand. A curse for precisely the same reason. Whether the blessing outweighs the curse I will leave it to the reader to judge.

Methodologically, this study is a blend of document analysis, interviews (both in person and by telephone), and reports of evaluations and studies undertaken by others. I used the documentary record as much as time and resources permitted; in this, the ERIC system proved extremely and perhaps ironically useful. I have tried to identify the places where out of necessity I relied more on personal recollection than I would have liked.

A number of people have assisted greatly in the preparation of this volume. First among them are the many people associated in one way or another with NIE. I cannot name all of them here, though nearly all are identified in the Chapter Notes. For their special contributions, I do wish to thank Charles Haughey and Fritz Mulhauser. Charles spent many hours telling me about the pre-history and early history of dissemination at NIE. Fritz's dispassionately critical analysis of a very early version of this volume, presented as a paper at the 1981 AERA Annual Meeting in Los Angeles, was extraordinarily helpful. I suspect that both Charles and Fritz will find a great deal to criticize in the present version. Yet, I hope they find something of value in it to repay their assistance.

David K. Cohen read more drafts than either of us cares to recall. Throughout, he was superb, demanding clearer thinking and better writing while urging me on. Terry Deal plunged rapidly and cheerfully through more prose than anyone freshly returned from Bali should be asked to read and emerged with more fascinating insights about the mythical-symbolic dimensions of this story than I could possibly work into the present volume. Matthew Miles' fastidiously detailed critique corrected a number of oversights

and errors. Carol Weiss was especially helpful in pressing me to clarify the main line of argument in the final chapter. Of course, none of these people bear responsibility for remaining faults in the volume.

I thank David P. Crandall, Principal Investigator of the Study of Dissemination Efforts Supporting School Improvement, for the opportunity to research and write this volume, for his great patience as I labored far longer on it than either of us anticipated, and for several helpful suggestions along the way. Thanks also to Kory Hellmer for her help with the notes and to Elsa Martz, who taught me to never, ever split an infinitive.

Finally, I owe far more than the customary thanks to the people who typed the many drafts of this report -- Pat Bales, Margaret Broderick, and Clif Lund-Rollins of The NETWORK's Word Processing unit.

Andover, Massachusetts
May, 1982

TABLE OF CONTENTS

	Page
Chapter One: The Creation of NIE and the Dissemination Problem	1
Historical Background on Federal Educational Research Policy and Programs.	3
A View of the USOP Research Unit in Its Environment	6
The Creation of NIE	7
The Great Chivas Regal Showdown	12
Analysis and Politics	13
Dissemination Becomes Politically Important	14
The Dissemination Experiment: A Continuum of Programs	17
Competing Programs in an Entrepreneurial Bureaucracy	19
Plan of Balance of this Volume	23
References and Notes -- Chapter One	25
 Chapter Two: The Educational Resources Information Center	 26
The Origins and Creation of the ERIC System: 1959-1964	 26
The Growth and Development of ERIC: 1964-1969	33
The ERIC System: A Brief Description	41
1969-1972: Reorganization, Rude Shocks, and Retrenchment	44

Table of Contents (Continued)

	Page
The Fry Report: High Marks for ERIC	51
1972-1973: ERIC Meets NIE	53
ERIC in NIE: Technical Improvements and the Education Practices File	56
Some Observations on the Origins and Evolution of the System	61
Problem, Strategy, and Assumptions in the ERIC System	63
References and Notes -- Chapter Two	67
 Chapter Three: State Dissemination Capacity Building Program	 70
The Havelock Study	71
Clemens' Vision of the SEA as a Facilitator of Change	78
The Streams Flow Together: The Pilot State Dissemination Program	83
It Works: The Pilot State Dissemination Program According to Sieber	84
Extension Agents and Educational Renewal	88
The Creation of NIE and The Great Chivas Regal Showdown	92
The Interstate Project on Dissemination	93
The State Dissemination Capacity Building Program: The Phoenix Rises	97
The NTS Evaluation	99
Some Observations from The NETWORK's Research in SEAs	102

Table of Contents (Continued)

	Page
Problem, Strategy, and Assumptions in the State Dissemination Capacity Building Program . . .	103
The Byzantine Interplay of Problems and Solutions in SCBP	107
References and Notes -- Chapter Three	110
 Chapter Four: The Local Problem Solving Group	 113
The Urban Sites/Documentation and Technical Assistance Project.	115
Organizational Climate and Organizational Problem Solving	118
Finding a Language: The Baggage of Connotations	119
Dissemination versus "Natural" Organizational Behavior	120
"Lessons" versus Exemplary Practice	121
Strategies for Problem Solving versus Strategies for Capacity Building	123
Meanings of "Sustained"	123
Pitfalls and Paradoxes of Capacity Building	124
Deep Organizational Change Through Assistance? . . .	124
Problem, Strategy, and Assumptions in the Urban Sites/Documentation and Technical Assistance Project	125
The Teachers' Centers Exchange	129
Origins of the Teachers' Centers Exchange	129
"Roots"	133
"Strengthening and Extending" The Network	135

Table of Contents (Continued)

	Page
Operations of the Teachers' Centers Exchange (TCE)	135
The Teachers' Center Exchange and the USOE Teacher Center Program	137
Summing Up, Formatively	141
Problem, Strategy, and Assumptions in the Teachers' Centers Exchange	147
References and Notes -- Chapter Four	152
 Chapter Five: The School Practice and Service Division	 155
The Concept Paper	157
From Concept Paper to Request for Proposal	160
The Research Contract	164
The Findings: It Works	169
Problem, Strategy, and Assumptions in the Research and Development Utilization Program	176
The Research and Development Exchange	179
The Original Conception: An "R&D Dissemination and Feedforward System"	181
Improved Accessibility	182
Improving Consumer Information	183
Improving Capabilities for Rational Decision Making	184
Dissemination, Training, and Feedforward	185
The Organizational Form of the System	185
The SEAs Respond	186

Table of Contents (Continued)

	Page
Cooperative Planning	187
The View from the Regional Exchange at Research for Better Schools	190
Some Reflections on the Evolution of the R&D Exchange	198
Problem, Strategy, and Assumptions in the Research and Development Exchange	199
References and Notes -- Chapter Five	204
Chapter Six: Reflections on Dissemination at NIE . . .	207
References and Notes -- Chapter Six	215

CHAPTER ONE: THE CREATION OF NIE AND THE DISSEMINATION PROBLEM

The National Institute of Education was created in 1972 to improve American education through research and development. Domestic policymakers in the Nixon administration had concluded that the Great Society programs of the Johnson era were not working and that better ideas, not more dollars, were needed to enable the schools to reduce educational inequality and to solve other problems thought to afflict the nation's educational system. Although the creators and early leaders of the Institute were bullish on research as a way of solving educational problems, they were puzzled, confused, and sometimes downright skeptical about programs designed to get the research into practice -- programs of dissemination.

This early skepticism and confusion had profound consequences for dissemination in NIE and for the Institute as a whole. Initially, NIE's disinclination to allocate dollars for dissemination contributed to Congressional animosity toward the Institute. In turn, the Congressional animosity threatened the agency's existence and thwarted achievement of its creators' hopes that NIE would match the prestige and achievements of the federal government's other great scientific research institutes. Later, under Congressional pressure, the NIE leadership's inability to choose a single course of action led to the initiation of a broad range of programs designed to solve what came to be called "the dissemination problem."

That is, the absence of decisive direction from NIE leadership and the simultaneous presence of Congressional demands to demonstrate the power of R&D to improve practice meant that people with very different perceptions of the dissemination problem, and very different ideas about how to solve it, gained opportunities to translate their ideas into programs. To some of these people, "the dissemination problem" appeared to be a concrete but technical problem of collecting, abstracting, indexing, and making research reports accessible to educators who seek them out. To others, it appeared to be a problem requiring specialists to mediate between the organized, indexed collection of research information and educators who need it. To people who believed "the real problem" was to make schools as organizations more reflective, resourceful, and self-renewing, dissemination appeared to be the wrong problem to worry about. To still others, the heart of the problem was that research was too obscure, scattered, diffuse, and apparently contradictory -- it wanted synthesis and translation to become actionable. Thoughtful eclectics saw the problem as a complex of these and other problems.

The initiation and support of diverse programs based on these views may be regarded, speaking loosely, as a natural variation experiment to test different solutions to a persistently troublesome problem of federal school improvement policy. Accordingly, this volume addresses the question, "What may be learned from the experiment?"

At least two different kinds of lessons may be derived from the NIE experience with dissemination:

- First and most obviously, one may ask questions about what each program tried to achieve and how well it worked. Specifically, how did each define the dissemination problem? What strategy for solving the problem did it embody? On what assumptions was the strategy based -- that is, what would have to be true if the strategy were to be effective in solving the problem? And what does the actual experience of the program imply about the effectiveness of the strategy and accuracy of its underlying assumptions?
- A second and less obvious kind of question has to do with the process through which the program arose, evolved, and was implemented. Why was the dissemination problem defined as it was? Who conceived the program's basic strategy, and why? How did political and bureaucratic factors shape the conception, design, and evolution of the program? Why were certain assumptions made when in retrospect they seem so obviously flawed? In short, how did institutional factors within the agency and in its environment influence NIE's attempts to solve the dissemination problem?

Questions of the first sort might be called analytic and, in an everyday sense of the term, evaluative. Questions of the second sort are more historical in character. This report addresses questions of both sorts. So it might be thought of as an analytic history of dissemination at NIE. Generally, however, the analysis of underlying ideas and the evaluative reflections are embedded in the history. That is, in the course of telling the story of dissemination at NIE, the report shows how different people defined the problem, what strategies they borrowed or fashioned in order to attack the problem they saw, what explicit or tacit assumptions they made in the process, and how their ideas worked out.

Embedding the analysis and evaluation in the historical narrative is intended to make for more interesting reading than would a purely analytic piece. This approach is also based on a belief that the understanding which emerges from an examination that places assumptions and strategies in the context of historical events will be deeper and more realistic for it. Policy is made, implemented, and modified in a complex institutional context, not in an atmosphere of Platonic contemplation.

In fact, a central thesis of this analytic history of attempts to solve the dissemination problem is that slowly and haltingly, the federal research policy system has learned a good deal about how research may affect practice through dissemination -- and about the limits upon the power of research and dissemination to improve practice. The system has "learned" as federal officials in charge of research have borrowed, imported, dreamed up, and otherwise devised programs in response to demands placed upon their

organizational units by superiors within their agency, by powerful budget and policy review units within the executive branch, by the Congress, and by other parts of the complex intergovernmental system that governs and operates education in America. The objective in view has seldom been to learn. It has been to solve substantive, bureaucratic, and political problems. But nonetheless, the persistent efforts of research officials to survive by adapting to their institutional environment has produced a rich fund of experience. This report attempts to set down that experience and to make some of the lessons explicit.

Because events early in the history of the Institute were so fateful for dissemination and because these events can be understood only in light of the previous decade of federal policy regarding educational R&D, some background on federal educational research policy is provided in the next section.

Historical Background on Federal Educational Research Policy and Programs

To understand dissemination at NIE, one must understand the reasons for the creation of the Institute and the expectations that accompanied its creation. Accordingly, this section provides a brief history of federal support for educational R&D. It begins by sketching the rise of R&D programs within the U.S. Office of Education, but it focuses principally on the development of dissatisfaction with the management and quality of research at OE -- dissatisfaction which NIE was intended to cure.

Significant federal support for research and development in education began with the Cooperative Research Act (CRA) in 1954. The Act, proposed by President Eisenhower, was two-edged. It provided modest support for research (e.g., \$1m in 1956) but also prohibited OE from running its own internal research program. The prohibition on internal research was intended to keep down OE's staff size. Most Cooperative Research Program (CRP) dollars were spent to support small projects carried out by researchers in schools of education. The questions and problems addressed by such projects were defined largely by the proposers rather than by the government.

By the early 1960's CRP began to draw criticism from federal policymakers and even from managers of the program itself. While CRP had made a contribution, the work it funded was perceived to be "fragmented, non-cumulative, and inconclusive." Further, the results were not readily applicable to improve educational practice. In an effort to remedy these deficiencies, in 1964 USOE began to establish a set of special research and development centers. The centers were located in universities, and each was intended to design and carry out a coherent, sustained program of research whose cumulative results would contribute to the resolution of federally identified problems in a certain area (e.g., urban education, higher education management).

The R&D center initiative ran into difficulties both within OE and at the level of the centers themselves. Within OE, there was no clearly articulated agenda of federal priority areas or problems. Thus, there was simply no way the program could counter criticisms that CRP had been fragmented and insufficiently focused on urgent problems confronting the nation's education system. Within the centers, the individualistic ethos of the university meant that the actual research agenda was set more by the accumulation of projects pursuing questions of interest to tenured faculty than by coherent planning. Further, the orientation and skills of center personnel meant that most were neither inclined nor equipped to translate the results of their work into specific innovations for dissemination. Thus, during their early years, the centers seemed unlikely to achieve their goals of increasing the coherence, continuity, and applicability of educational research.

In addition to these difficulties, influential people in and around the Johnson administration believed that the centers had failed to attract "better minds" to educational research. William Cannon from the Bureau of the Budget later recalled, "We didn't see the R&D centers as being good enough. We were thinking of other kinds of institutions even before the Gardner Task Force."²

The Gardner Task Force was one of several such groups set up by President Johnson to specify an agenda for social reform legislation in the aftermath of President Kennedy's assassination. Chaired by John Gardner and with Cannon as its chief staff person, the Task Force laid out a hugely ambitious program for educational improvement, of which Cannon's "other kinds of institutions" were a small but significant part. Specifically, the Task Force called for a small number of National Educational Laboratories which would do some research but which would concentrate on developing and disseminating well-defined, immediately usable educational innovations. Modeled after the large national laboratories in the physical sciences (e.g., Oak Ridge, Argonne, Brookhaven), the labs' prestige and prominence would attract "better people" into educational R&D.

Through Title IV of the Elementary and Secondary Education Act (ESEA) of 1965, the Congress broadened the authority which the Cooperative Research Act had given USOE to support research and development. In his testimony before Congress, Commissioner Frank Keppel changed the "National Educational Laboratories" into "Regional Educational Laboratories." The change was motivated by a desire to neutralize opposition from those in Congress who feared increased federal control over education and by a need for pork barrel enticements to get ESEA passed.

A combination of administrative confusion and a change in leadership within the Bureau of Research led USOE to take the "regional" label at face value. Regionalization was viewed as a way to tie R&D more closely with practice. Labs would provide local school districts with ideas, innovations, and guidance concerning the best ways to spend the new money which ESEA had

channeled their way. Thus, by the end of 1966, the Bureau had used its broadened authority for R&D to fund twenty separate laboratories distributed all across the country.

By this time, the Gardner Task Force was out of business, but the Bureau of the Budget obviously was not. Emerson Elliott -- chief budget examiner for federal education programs, a colleague of Gardner Task Force staff man William Cannon, and later a major figure in NIE's creation and early history -- began raising questions about the laboratory program in the late spring of 1966. Elliott pressed for fewer labs, with a heavier concentration on demonstration and dissemination, than was evident in plans for the labs then emerging.

Elliott was not alone in criticizing the burgeoning lab program. Influential people in universities, the research community, state education agencies, and the President's Science Advisory Committee told USOE Commissioner Harold Howe and John Gardner -- now Secretary of HEW -- that USOE staff were inept and that the emerging labs looked pedestrian. In November 1966, Gardner appointed Frank Chase, Dean of the University of Chicago's School of Education, to investigate the program. Having done so, Chase criticized some unnamed laboratories for pursuing a mistaken policy of "regionality" or "relationship" and exhorted the labs to concentrate on "systematic development," but otherwise praised them for rapid progress in getting under way and portrayed them as promising institutions.

But the Chase report satisfied neither the Bureau of the Budget (BOB) nor the Office of Science and Technology (OST), an organization set up by President Kennedy to oversee research and development across the government and to advise the President about science policy. In part, OST functioned as a kind of staff office to the President's Science Advisory Committee (PSAC). John Mays, assistant to the OST Director for Education and Education R&D, perceived inept management to be supporting mediocre work at USOE. There were too many labs, and they were full of second rate people from the education field. PSAC launched a second investigation, this one to be conducted by its newly created Panel on Educational Research and Development. Frank H. Westheimer, a Harvard professor who had recently completed a study of U.S. research in chemistry, headed the study. Although the Westheimer study produced little and late, Mays and others surrounding PSAC remained skeptical of Chase's conclusions and critical of the Bureau's handling of R&D.

During the late 1960's, the criticism spread and continued unabated. In 1967, Congresswoman Edith Green found the Bureau of Research slow, bungling, and inept. In 1969 when an USOE official visited Warren Magnuson, Chairman of the Senate Appropriations Subcommittee for DHEW, Magnuson's attack on educational R&D was so virulent that the official "could hardly finish a sentence."³ By fiscal 1971, the Congress was sufficiently disenchanted to cut the budget for research training by 68.5%, for general research by 33.5%, and for dissemination by 28.5%.⁴

Between 1967 and 1969,* ten separate studies of the federal educational R&D program produced predominantly critical results.⁵ After President Nixon took office in 1969, a set of task forces commissioned by HEW Robert Finch to recommend priorities found "little enthusiasm" for OE's program of research.

Between 1969 and 1972, USOE's research unit made one last effort to counter external criticisms, this time by adopting a mode of operation modeled after the Defense Department's "mission-oriented" style. This entailed greater reliance on internal staff work to set goals, specify procedures for achieving them, issue detailed Requests for Proposals, monitor contractors' work, and otherwise centralize control over research within the research unit rather than permitting "the field" to define problems and initiate work. At the same time, funds for basic research were reduced and the budget for development increased. Like the decade's worth of initiatives before it, however, this innovation failed to convince Congressional and executive branch critics that USOE's research was solving educational problems. In the bargain, it alienated many researchers and university people who might otherwise have been among the Bureau's supporters.

A View of the USOE Research Unit in Its Environment

The overall picture that emerges from this history is one of a beleaguered research unit attempting to meet the expectations that go with the resources which the Congress has provided. In the expansive early days of the Johnson administration, these expectations took the form of high hopes that research could help the schools improve achievement among poor and minority students. But as USOE's administrative apparatus was overwhelmed by the quantum jump in resources and complexity occasioned by the passage of ESEA, and as the elevated priority of education research within the federal government brought closer scrutiny by people accustomed to what they regarded as higher standards of management and thought, the hopes turned into criticisms and demands.

The source and nature of the demands changed over time. In the early sixties, well before the external demands became acute, research unit managers and their advisors had concluded that work supported by the Cooperative Research Program was too fragmented and non-cumulative. By 1964, this internal criticism led to the R&D center initiative. Even as the R&D center program took shape, however, people in the Bureau of the Budget were thinking of "other kinds of institutions". The centers were "not good

*During this time also, an intensive examination of the processes of educational research and development policy in the U.S. was conducted by the Organization for Economic Cooperation and Development (Reviews of National Policies for Education, United States. Paris: OECD, 1971).

enough". President Johnson's Gardner Task Force called for a few excellent National Educational Laboratories. In 1966, partly to satisfy anticipated political demands from the Congress, USOE funded twenty Regional Educational Laboratories. This brought criticisms from prestigious university people, researchers, the Bureau of the Budget, the President's Science Advisory Committee, and the Office of Science and Technology that the laboratories were neither few enough nor excellent enough. About the same time, Congressional critics were calling more insistently for more efficient management of the agency. And after Nixon took office in 1969, the criticism only intensified.

Each of the programs which USOE mounted in order to satisfy the severe, changing, and sometimes conflicting demands from its institutional environment was predicated on a somewhat different notion as to why research had not yet produced solutions to the problems thought to plague education. The Cooperative Research Program would increase the amount of research. The R&D Centers would make it more coherent and cumulative. The laboratories would develop it into usable innovations and disseminate it. In addition to specific programmatic initiatives, reorganizations were carried out to improve the management and coordination of research. (With the possible exception of some members of Congress, no one appeared to believe that research was an inappropriate or intrinsically weak instrument for solving educational problems.) Despite all of these efforts to reform research, at the end of the decade, USOE had still failed to convince its critics that it could manage a creditable R&D program.

The Creation of NIE

In 1970, a new concatenation of circumstances made the perceived inadequacies of USOE's research program politically intolerable. Nixon administration officials took the position that Johnson's Great Society programs -- including ESEA Title I and other compensatory education programs -- had proved ineffective. Domestic Council Chairman Daniel P. Moynihan cited various studies and evaluations to support this contention. Using this justification, during 1969 Nixon had vetoed several education appropriation bills as "excessive." This had angered many members of the Democratically controlled Congress and infuriated the education interest groups which had pressed for budget increases. The administration needed an initiative that would demonstrate some commitment to educational improvement without requiring large expenditures.

While people within the administration agreed that the major federal education programs had failed, nobody had any better ideas. Moynihan's deputy Chester Finn later explained the impasse a bit more grandly:

Mankind had arrived at one of those moments in history when no one, least of all government, quite knows what to do; one of those moments when it begins to appear that everything you thought was true isn't true, but you have

no truth to substitute for it. Social science had, in a sense, outdistanced public policy.

As . . . [we] reasoned, if what presently goes on in the nation's schools, insofar as we are able to measure it, has little effect on student learning, then we had better find out what does have an effect and how to alter it.⁶

So what was needed was deeper understanding that would lead to better ideas. A Working Group to develop new initiatives in education was set up. Among its members were people from the trio of executive branch policy and program review units which had criticized USOE's research program for years -- the "Unholy Trinity" of the Office of Management and the Budget (OMB), the Office of Science and Technology (OST), and the Assistant Secretary for Planning and Education (ASPE). They argued that the Office of Education could never be expected to improve its research program sufficiently to produce the analytically powerful, empirically verified understandings that were needed to rescue the federal education effort from bankruptcy. A whole new agency was required, one that would be more like the prestigious agencies that supported research in the physical and natural sciences -- an educational research equivalent to the National Science Foundation and the National Institutes of Health. In a March 1970 message to the Congress, President Nixon proposed such a National Institute of Education.

Principally because NIE was never a high priority item in the Congress, authorizing legislation for the Institute was not passed until June of 1972. During the interval between Nixon's original message to the Congress and final approval of the legislation, two distinct phases of planning for the Institute were conducted. The first and more important phase was carried out by Roger Levien, a Rand Corporation researcher recommended by Working Group member Thomas Glennan and appointed by USOE Commissioner James Allen in April 1970. After consulting broadly with people in the government and in "the field" -- including the Unholy Trinity elite and the prestigious social scientists they favored, as well as more traditional constituencies such as the educational professional associations -- in December 1970 Levien submitted a "preliminary plan" for the Institute. The goal of the Institute, Levien wrote, should be "to improve and reform education through research and development."

To achieve this goal, the Institute should be divided into four broad program areas: Solving Major Problems, Improving Educational Practice, Strengthening Education's Foundations, and Improving the Educational R&D System. Approximately half of the agency's budget should be allocated to the Problem Solving area, which would mount large, coherently designed projects involving research, development, experimentation, evaluation, and implementation activities. Projects would be designed to improve education for the disadvantaged, the quality of education, and resource use in education. The Improving Practice area would

receive about a quarter of the budget to deal with instruction, organizational arrangements, assessments, and professional development. Improving Practice activities would be of a more traditional sort, such as curriculum development and teacher training institutes. The Strengthening Foundations area, with ten to fifteen per cent of the budget, would sponsor basic research. As with the Institute overall, Strengthening Foundations would draw "better people" or "best minds" -- especially gifted and prestigious social scientists from "the disciplines" rather than from schools of education -- into the field of educational R&D. No short term pay off was to be expected from Strengthening Foundations. The final area, Improving the R&D System, would upgrade the quality of personnel in the field through fellowships and traineeships, thus complementing other units' emphasis on recruitment. It would also award some institutional support grants to build the capabilities of organizations in the system.

For our purposes here, it is worth noting that Levien's plan would have left virtually all dissemination activities in USOE. Apparently, "better people" and "best minds" did not engage in dissemination.

At about the same time Levien submitted his report, a new Commissioner took over at USOE. Unlike his predecessor James Allen, who as chief state school officer in New York had served on the Gardner Task Force, incoming Commissioner Sidney Marland had fewer ties and less standing with the Unholy Trinity. So it was not long after Marland set up an NIE Planning Unit that others within the administration countered by establishing a Steering Committee to guide the activities of the Planning Unit. The result was a second phase of planning characterized by a great deal of hauling and tugging between the Planning Unit and the Steering Committee and some divergence of priorities within the Steering Committee -- essentially a continuation in a new form of the longstanding conflict between USOE and the Unholy Trinity.

Meanwhile, between February and June of 1971, the House Select Subcommittee on Education held sporadic hearings on the NIE proposal. The hearings excited little interest in the Congress and were spottily attended by virtually all members except Chairman John Brademas of Ohio, a Democrat but an admirer of Daniel Moynihan, and Congressman Al Quie of Minnesota, not a member of the subcommittee but a strong supporter of the NIE idea. Nor did the proposed Institute attract the support of scholarly associations or national education organizations. In fact, soon after President Nixon announced the NIE idea, a representative of the NEA quipped that the administration planned to "fight education problems with words, not dollars,"⁷ a riposte to the conservative pronouncement that the federal government had been trying to fight problems by "throwing money at them." Nevertheless, those who did testify tended to speak expansively of an Institute funded somewhere between \$300 and \$400 million dollars a year, independent of USOE, hiring better

personnel and supporting excellent research that would soon contribute to the resolution of major problems confronting the nation's schools.

Congressional impatience with USOE's research efforts plus vigorous leadership by Brademas, Quie, and a few others were just sufficient to triumph both over widespread Congressional skepticism that research could ever produce real results and over mounting antipathy toward the Nixon administration. By unimpressive margins, the Congress did include authorization of NIE in the omnibus Education Amendments of 1972. But the Institute was on very shaky ground in the Congress. A majority of the House Appropriations Committee on Labor and HEW, the House committee which would have to approve budget requests for the Institute, voted against creation of the agency. Even Brademas conceded that support for educational R&D in general was very weak. As he noted in a later address to a group of researchers,

My own perception is that educational research does not stand well on Capitol Hill for several reasons, one of which is, we don't know what it is. Another is that, whatever it is, we don't think it makes much difference. And another . . . is that we have the apprehension that the fruits of investment in educational research are not really translated into the system.⁸

To help ensure that the fruits of NIE-sponsored research would be translated into the system, Brademas insisted over the objections of Commissioner Marland, and probably to the horror of some among the Unholy Trinity, that NIE should have broad authority for dissemination. In fact, the Institute was to take the lead among all federal agencies in disseminating educational R&D. Expressing this determination, Brademas demanded that the Conference Report stipulate the transfer of the National Center for Educational Communication -- USOE's principal dissemination unit -- to the new Institute. No other USOE activity was explicitly slated for transfer by the Conference Report.

To sum up, then, as one expression of a general ebullience about education as a means of social equalization, in the mid-sixties the federal government sharply expanded its support for educational research. During the late sixties, criticism of the resulting research program grew. Various initiatives were undertaken to satisfy the demands for improvement. Whether these initiatives failed substantively or not, they failed to still the criticism. Further, during the very late sixties and early seventies, policy advisors and analysts in the Nixon administration concluded that the large federal programs (none of which were based on research) providing dollar support to reduce educational inequalities weren't working either. Having found the old ideas about education and inequality to be bankrupt, the officials realized that they didn't have any better ones. More powerful analyses and deftly conducted empirical studies were

needed. Research was needed. But, in the opinion of many officials, the agency responsible for educational research was "hopelessly inept" and habitually gave money to "second rate" researchers. So a new agency was required.

The new agency, a National Institute of Education, was proposed. The executive branch advisors and analysts who had long criticized USOE's research efforts and who had conceived the new agency in the image of the other great scientific institutes supported by the federal government had high hopes for it. The bullish testimony before Brademas' committee concerning robust budgets and breakthroughs on major problems had both expressed and confirmed their expectations. They believed they had a mandate to strengthen the scientific and technological foundations of education. This would call for deeper thinking and more clever experimentation by "better minds." It would also take time.

In contrast, the Congress that authorized the new agency and that would have to appropriate funds for it was lukewarm about it. Most members were not just frustrated with the Office of Education's program but were growing skeptical about the whole idea that research could improve education. "We want results, and we want them now," was the prevailing attitude. From their point of view, the creation of NIE was one more in a long series of attempts to reform educational research. None of the others had worked. Maybe this one would, but they weren't holding their breath. In fact, some -- like Senator Magnuson of Washington -- could hardly wait to let go with both barrels, one out of frustration with educational research and the other out of animosity toward the Nixon administration.

In a sense, the federal educational research unit had neutralized criticism from elite executive branch policy and budget review offices by incorporating some of their most influential staff members. Thomas Glennan of the White House Working Group became NIE's first director. Emerson Elliott of OMB was named deputy director. John Mays of OST became a science advisor. Bernard Martin of OMB came to head planning.

But no equivalent maneuver to disarm Congressional critics was executed. In fact, the Nixon administration was fighting a running battle with the Congress, vetoing bills and impounding funds for education and other social programs. Many members of Congress viewed the Institute and the administration's vow to "lead with ideas, not with dollars" as no more than camouflage for cutting social spending. To make matters worse, by the time the Institute was authorized, Daniel Patrick Moynihan's famous memorandum advocating a period of "benign neglect" toward Blacks had resulted in his resignation from his powerful position within the administration. There remained in the White House no one who was both powerful and motivated to protect the fledgling agency. And as if the agency were not already vulnerable enough, the leadership's pervasive skepticism -- sometimes bordering on contempt -- toward the general run of educational researchers would soon alienate them as a potential source of support on Capitol Hill.

The Great Chivas Regal Showdown

How did the leadership of this new agency created to reform education by reforming research regard the legacy of dissemination programs inherited from USOE? About as skeptically as they regarded the research programs inherited from USOE.

In January of 1973, Thomas Glennan -- formerly of the Office of Economic Opportunity and the White House Working Group that conceived the agency, now its first Director -- called a day-long meeting to review the programs previously operated by USOE's National Center for Educational Communication (NCEC). Joining Glennan in the review were several advisors, analysts, and senior managers. These included Deputy Director Emerson Elliott, formerly of OMB; Science Adviser John Mays, formerly of OST; Bernard Martin, head of NIE's Office of Planning and Management, formerly of OMB; Marc Tucker, formerly of Northwest Regional Educational Laboratory and the NIE Planning Unit; and others.

The two main NCEC programs were the Educational Resources Information Center (ERIC), a complex, computerized system of research information storage and retrieval, and the Pilot State Dissemination Program, through which a small number of state education agencies had been funded to experiment with dissemination approaches modeled after the agricultural extension agent program. The Pilot State program supplemented ERIC and other information sources with in-person assistance to education from field agents, backed up by information specialists. Presenting the NCEC program and plans were Lee G. Burchinal, formerly Director of NCEC, and several associates, including Thomas Clemens, who with Burchinal had played a key role in the development of both ERIC and the Pilot State Program.

The review meeting is still remembered as a stunning disheartenment by Burchinal and several of his then-colleagues. From the very outset, they felt Glennan and his associates' attitude was rigidly and pervasively negative, sometimes to the point of contempt. Burchinal recalls one advisor betting him a bottle of costly scotch -- Chivas Regal, to be precise -- that he couldn't name five schools where a piece of research disseminated through his programs had contributed demonstrably to an increase in student achievement. Perceiving the bet as rhetorical, Burchinal did not respond. Burchinal later summed up the reviewers' attitude toward ERIC in one question: "How can a document retrieval system possibly hope to change the way kids learn?"⁹

Glennan remembers the meeting a bit differently.¹⁰ He recalls being less skeptical about ERIC than about the Pilot State Dissemination Program. Although he had some notions concerning possible ways of reorganizing the ERIC system and improving its performance, he says he never even considered eliminating or cutting it back drastically. The Pilot State Program did strike him as distinctly implausible, but largely for reasons quite

different from those advanced by some of his colleagues. Retrospectively, at least, his criticisms focused on the infeasibility of the extension agent-to-client ratios projected by Burchinal. He thought that far more agents would be required to serve a given state than the handful which NCEC seemed to be claiming to be sufficient. Even if the system worked on a pilot basis, he believed it would be too expensive to support on a full-scale basis.

Glennan adds that other arguments against the extension agent idea were made. At least one of his advisors, he concedes, took the view that since virtually all previous educational research was second-rate, there was little point in spending NIE funds to disseminate it. Within a few years, better work would be available. Substantial support for dissemination should await its arrival.

Former NIE Planning Unit member Marc Tucker raised more fundamental questions about "the whole information science approach." Practitioners relied on informal advice from trusted peers, not on formal information systems, Tucker believed. "I had been around too many urban schools to believe that information, no matter how you got it there, was going to have much effect," he later recalled.¹¹

The meeting ended with Glennan's request that the NCEC staff rethink or provide additional justification for several aspects of their program. According to Glennan, the requested memoranda were never forthcoming. "I don't know what happened to those people," Glennan says in retrospect. "They just sort of rolled over and played dead." Burchinal says he was convinced by the meeting and other events that "there would be no serious role for dissemination at NIE -- no consistent support, no recognition of its importance." Within a month, he had left the Institute to take a position with the National Science Foundation.

Soon after, ERIC was trimmed back, the Pilot State Dissemination Program was brought to a close, and Marc Tucker was asked to head a small internal task force to study "the dissemination problem." Glennan was intrigued by Tucker's arguments that more attention should be paid to informal processes and to the ways practitioners and schools actually did address their problems -- to what Glennan, an economist, later referred to as "the demand side" of the dissemination problem.

Analysis and Politics

The decision to rethink dissemination, to explore alternatives, to circle around the problem and come at it from a new point of view was typical of Glennan's leadership style, and accordingly, of the Institute's typical mode of operation in the early days. What had gone before had not worked well. The Institute had to do better.

In a situation where the wrong answers were clear but the right answers were not, a reflective, exploratory, analytical, and frequently intellectually adversarial style -- the style of the university, the style of the scientist -- seemed appropriate as a way of generating and examining new approaches to all aspects of problem solving through research. This applied no less to dissemination than to any other phase of the operation. If the federal research policy system had previously "learned" as an almost accidental by-product of attempts to cope with a demanding institutional environment, it would now learn more deliberately.

But this amounted to adopting the style of the academy within a bureaucracy which in turn was situated within a political environment far more impatient than Glennan realized. NIE had begun to behave as though it had the status, the authority, the cachet of other federal scientific agencies. Yet, in the eyes of some key people in the Congress, NIE was an agency on probation, an agency that had better look good and produce fast or go out of business.

During the first two years of its existence, this Congressional presumption against the Institute combined with political errors in Congressional relations and in relations with potential supporters in the education community to plunge the Institute first into controversy, then into disrepute, and finally to near extinction. After enduring bitter criticism from the same Senator Magnuson who had already raked several USOE officials over the coals in the late sixties, in August of 1974 Thomas Glennan resigned his directorship. In September, the Senate Appropriations committee took the almost unprecedented step of trying to "zero out" the whole agency -- it recommended that NIE receive \$0 for fiscal year 1975. In House-Senate Conference Committee, a budget of \$70 million was salvaged for the Institute.

Dissemination Becomes Politically Important

One of the potential sources of political support alienated by the Institute during its early days were the Chief State School Officers. And one of the actions which had alienated them -- there were several -- was Glennan's decision to terminate the Pilot State Dissemination Program and to cancel plans to scale the pilot program up to a major educational extension agent program. State agencies couldn't expect to receive any significant portion of the Institute's research funds, but some among them had expected to receive both the dollars for dissemination and the symbolic recognition of their importance which the dollars would have conferred.

In retrospect, Glennan views his termination of the Pilot State Program as "a real error, not so much for substantive reasons as for political reasons."¹² Even before Glennan's departure, the Institute had initiated an effort to win the Chiefs back. In February 1974, Glennan and Elliott had instructed officials in the dissemination unit to meet with representatives of the Council of

Chief State School Officers and of some state education agencies previously involved with the Pilot State Program. This resulted in funding of the Interstate Project on Dissemination, a state agency effort intended to produce recommendations for federal dissemination policy. In August of 1974, when Glennan was forced out and Emerson Elliott took over as Acting Director, Elliott "made a very explicit decision that we were going to have to do something for the Chiefs."¹³ Soon after, a modified form of the Pilot State program was revived; operational planning began for the State Dissemination Capacity Building Program.

Meanwhile, in December of 1973 the task force which Glennan had previously set up to study the dissemination problem had submitted its report, Building Capacity for Renewal and Reform: an Initial Report on Knowledge Production and Utilization in Education. Because the task force had members who believed in the traditional approach to dissemination, as well as people sympathetic to Chairman Marc Tucker's point of view, it represented a blend, or rather a juxtaposition, of the two groups' perspectives. The former was expressed mainly in a chapter on "Building the Linkage and Support System," which embraced three strategies: building upon ERIC, providing appropriately formatted consumer information on the evidence of new products' effectiveness and on how to adopt and implement them, and improving product delivery. The very next chapter, "Building Capacity in the Operating System", announced a fundamentally different theme:

Because of the diversity within the operating system and the decentralized decision-making process, reform and renewal of local school districts will occur only if these districts develop the capacity to be more analytic in their behaviors, more sophisticated in the choice and use of resources (those generated by the R&D community as well as others), and better able to assess critically the effectiveness of what they are doing. We call this set of skills "problem solving behavior."¹⁴

In the spring of 1974, during the same period when dissemination activities involving state education agencies were being revived, Glennan and Elliott set up a small Local Problem Solving Program and put Tucker in charge of it. Although Building Capacity had portrayed the enhancement of schools' and districts' own capabilities for problem solving as complementary to the provision of R&D resources from outside, Tucker and his colleagues' private position was somewhat more radical. To them, organizational and political factors within school districts seemed so powerful that by contrast research information was of almost negligible importance. Partly because of this divergence of viewpoints, Tucker argued that Local Problem Solving (LPS) should be independent of the dissemination unit. After some dispute, he prevailed. LPS was given autonomy and a mandate to plan a program of research and demonstration activities founded on the idea that local problem solving capabilities were crucial to educational improvement, should be better understood, and might be enhanced by federally sponsored assistance.

The Local Problem Solving unit launched two principal programs to try out its ideas. First, LPS awarded grants to a set of nine agencies -- including mental health centers, teachers' centers, an association of business and industrial leaders, a department -- that were using different strategies to improve schools' problem solving. To learn from the work of these agencies and use the lessons to help other schools, LPS awarded a "Documentation and Technical Assistance" contract to a pair of research and assistance firms. This report treats the set of grants and the study contract as a single program -- the Urban Sites/Documentation and Technical Assistance (DTA) Program. The second LPS-initiated program was the Teachers' Center Exchange. The Exchange was designed to strengthen teacher centers that had sprung up all around the country, mostly with funding from foundations or local school districts, by promoting communication and reflection among these Centers. And perhaps more importantly, the Exchange was intended to help new centers by putting them in touch with the experienced, grassroots centers. The Exchange was, in part, an extension of Marc Tucker's observation that teachers tend to rely on informal networks of personal contacts for advice and support.

Now at least four programs representing different positions on "the dissemination problem" existed in the Institute -- ERIC, the State Dissemination Capacity Building Program (SCBP), Urban Sites/DTA, and the Teachers' Centers Exchange (TCEx).

Soon, still more would come into existence. Dissemination had become important not only as an area in which the Institute could provide funds to, and convey symbolic recognition upon, the state education agencies, but also as a form of activity which symbolized to the Congress a concern for immediate, concrete impact on education practice. The Institute's leadership now needed dissemination and needed good ideas for ways to spend an increasing share of the budget for dissemination.

In April of 1974, Glennan brought Senta Raizen -- formerly of the National Science Foundation, the NIE Planning Unit, and the Rand Corporation -- on board to head the dissemination unit. Though intrigued enough by Marc Tucker's ideas to consider putting him in charge of dissemination, Glennan was dissuaded from doing so by Tucker's lack of government and management experience.¹⁵ Raizen had both types of experience, plus an association with NSF and Rand, both highly respected in elite research policy circles.

At about the same time Raizen was hired, another important figure in NIE's dissemination effort was recruited to the Institute. With Marc Tucker's active support, Larry Hutchins was brought in from Far West Regional Educational Laboratory to join the dissemination unit. Raizen put Hutchins in charge of a School Practice and Service Division. Hutchins saw ERIC and the State Capacity Building Programs as too constrained and passive. He saw a need for NIE to take a more aggressive role in distributing and promoting the use of products the Institute or its predecessor research unit at USOE had sponsored. He found LPS's apparent rejection of R&D puzzling and even offensive.

Over the next two years, Hutchins spearheaded development of two more programs that sought to solve "the dissemination problem," the Research and Development Exchange (RDx) and the Research and Development Utilization (RDU) Program. Although they subsequently proceeded in quite different directions, the two programs originally grew out of a common matrix of ideas about dissemination. These included the notions of synthesis and consumer information. Synthesis, or R&D interpretation, was conceived as a way of overcoming the confusion educational practitioners were perceived to experience because research was scattered among many different sources, was characterized by apparently conflicting findings, was expressed in specialized language, and was focused and organized around researchers' rather than practitioners' interests. Consumer information was a response to a perception that practitioners needed clearer, more accessible descriptions of R&D products they might want to use, as well as full and accurate information concerning the evidence of the products' effectiveness.

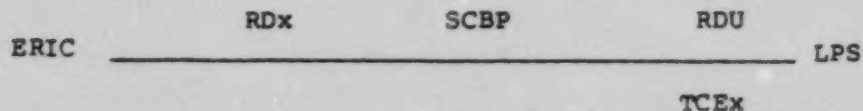
In addition to the ideas they had in common, each of the two School Practice and Service Division programs contained certain unique elements. In its original conception, the R&D Exchange included the idea of "feedforward," a process through which practitioners would (a) alert researchers to their needs, thus helping to set the agenda for research, and (b) contribute innovative practices and materials themselves, in keeping with the idea that practitioners are not merely consumers of knowledge, but producers as well.

"Linkage" was a crucial notion in the R&D Utilization Program, and one whose meaning changed as the program evolved. As expressed in early program documents, linkage referred to complex interorganizational arrangements intended to bring about broadly improved communication between practitioners and researchers, as well as narrower results in the form of practitioner adoptions of R&D products. Later, linkage referred more narrowly to the work of "linkers" -- people who helped schools consider, adopt, and implement products. Another increasingly important element in the programs was the linkers' and client schools' use of a well-defined, step-by-step "problem solving process." Though it varied across the program, the problem solving process amounted to a rational sequence leading from problem definition through such steps as problem diagnosis, search for alternative solutions, weighing of alternatives, adoption, adaptation and implementation, and evaluation of the results.

The Dissemination Experiment: A Continuum of Programs

By 1976, then, NIE had initiated or maintained at least six distinct programs, each with its own distinctive definition of the dissemination problem and each embodying a different strategy for solving it. As a kind of "advance organizer" or crude conceptual roadmap to orient the reader to the balance of this report, I want to offer an oversimplified interpretation of the programs' central

assumptions by locating them on a continuum. At one end is ERIC, with a focus on acquiring, indexing, abstracting, and reproducing the products of R&D. At the other end is the Urban Sites/Documentation and Technical Assistance Program, emphasizing the school's own organizational capabilities to identify and address its problems, with or without R&D products. It is possible, then, to locate other NIE dissemination programs at the intermediate points between these two poles.



In this view, the Research and Development Exchange was originally intended to focus most centrally upon synthesis and transformation of knowledge into forms more useful to practitioners and on providing consumer information on products of development. The State Dissemination Capacity Building Program emphasized the extension of information resources to local practitioners through state education agencies. The R&D Utilization program combined the active provision of R&D resources to local educators with use of a process intended to improve the rationality of local problem solving. The Teachers' Centers Exchange provided a somewhat different kind of support and resources to teacher, but it did emphasize continuous interpersonal assistance from organizations external to the individual school.

The analysis provided in this volume suggests that, over the half-decade preceding the creation of NIE as well as the first six or eight years of the Institute's history, in the sphere of dissemination there was an almost imperceptibly slow and certainly ironic drift away from research as the only answer to educational problems. Operationally, ERIC defined dissemination as the provision of improved access to products of research. The Pilot State Dissemination Program and its offspring, the State Dissemination Capacity Building Program, broadened this definition to include interpersonal assistance in selecting and using it. Eventually the RDU program incorporated the Local Problem Solving perspective, thus expanding the definition of dissemination to include activities designed to improve the research utilization capabilities and even the basic problem-solving capabilities of schools. What had been a mere instrument for getting research out to practitioners had become a more and more comprehensive set of services to schools. By the time of RDU, the balance had shifted to such a degree that the products of systematic R&D were subsidiary to the assistance provided to "users" of R&D. In fact, when RDU substituted practitioner-developed exemplary practices for R&D products while also increasing contact between

practitioner-developers and adopters, the school improvement process actually worked out better.*

This volume argues that while trying to solve what had been construed as an ancillary problem -- how to get research into practice -- NIE backed into a partial solution to the larger problem: how to improve classroom practice. From a school improvement point of view, the "unplanned variation experiment" in dissemination may prove to be more important than much of the carefully designed experimental research which the Institute has supported.

The irony is that the dissemination experiment calls into question a fundamental assumption on which the National Institute of Education was funded: that the main thing we needed in order to improve schools was the kind of knowledge about learning and teaching that only first-rate social scientists could produce. Slowly accumulating experience in dissemination -- greatly aided, (to note an irony within an irony) by social scientific research on dissemination and research utilization -- suggests that in the short run, knowledge produced by the able educational practitioners, supplemented by sustained in-person assistance, may be more important than social science research in improving practice. In the longer run, of course, social science may well produce the revolutionary breakthroughs envisioned by the creators of the Institute.

Competing Programs in an Entrepreneurial Bureaucracy

The six dissemination programs discussed in this volume arose through the workings of what Corwin (unpublished report, Abt Associates, 1980) has called "entrepreneurial bureaucracy":

In this type of agency the incentive system is the key. In the EB, the managerial strategy is to recruit bright, aggressive subordinate staff and give them the freedom they need to initiate and manage their own programs. They are rewarded with visibility, influence and autonomy which they can achieve in the field as well as in the agency. However, they are never given carte blanche and they must cultivate internal and external support for their plans. It follows that they must remain sensitive to the market and they must aggressively merchandise their ideas. They must also possess the interpersonal skills necessary in order to maneuver their projects through the bureaucracy, and they must have the political

*An alternative interpretation of these events is that the addition of interpersonal assistance did not represent a real drift away from research. Rather, it represented the expansion of a dissemination policy to include both research and assistance as complementary parts of what became a more comprehensive strategy.

savy needed to relate to and form fluid external constituencies. Because of this dependency upon upon personal constituencies, their loyalties are split between aggrandizing their position in the hierarchy and satisfying the clientele they are serving. But the staff person who can satisfy these demanding political constraints will be relatively free from many of bureaucratic controls characteristic of Old Line Agencies. In lieu of close supervision, the management relies upon the personal discretion of subordinates seeking "results".

The heavy reliance that is placed on creativity and personal initiative also calls for a diffuse decision-making structure and a corresponding autonomy for individuals and groups. Power is personalized, and activities are relatively unstructured, as they are in "personal bureaucracies"; the difference is that in the latter authority is centralized. However, EBs are not anarchies either. In this intensely competitive environment, employees often find it advantageous to trade off their individual autonomy in order to form temporary coalitions and power blocks. The result is a fluid and fickle division of labor, and numerous but often short-lived new initiatives.

Corwin enlarges upon the characteristics of the entrepreneurial bureaucracy by comparing it with the prototypical "Old Line Agency." A summary comparison of the two forms as characterized by Corwin may be found in Figure 1 on the following page.

Corwin concedes that the entrepreneurial bureaucracy has certain advantages, including the high degree of influence accorded substantive and technical experts, an ability to respond rapidly and continually to changing priorities, sensitivity to external constituencies that are not necessarily well organized to exert influence, creativity and high energy, and flexibility in management and problem solving. But he stresses the weaknesses of the form. In his view, these include fragmentation, an inability to plan and monitor, vague plans, improper exercise of power, and poor articulation of various elements within the agency because of a reliance on personnel who remain in the agency for a relatively short time.

Although Corwin applies the entrepreneurial bureaucracy label only to NIE, it should be clear from the historical background on educational R&D presented earlier that to a substantial degree, it also applies to the evolving program of research and dissemination sponsored by the U.S. Office of Education during the decade and a half before NIE was created. If this is not already clear, succeeding chapters should make it abundantly so.

Figure 1
Management Strategies Used in Entrepreneurial
Bureaucracies and Old-Line Agencies¹⁶

	<u>Entrepreneurial Bureaucracies</u>	<u>Old-Line Agencies</u>
1. Incentives	visibility and influence with the agency and in the field	predictable promotions and salary increases; increased responsibility
2. Behavior Reward	initiative, responsiveness to clientele, giving technical assistance and advice to contractors	compliance; loyalty to established policies and practices; monitoring contracts
3. Abilities Required	merchandising skills; interpersonal and political	administrative skills: coordinating and monitoring
4. Basis of Authority	professional expertise in a substantive field of research or practice	administrative experience in bureaucratic agencies
5. Authority System	decentralization: autonomy, discretion	centralization: compliance, close supervision
6. Division of Labor	fluid; temporary coalitions based on shifting competition	stable; clearly defined responsibilities and interdependencies
7. Allegiance or Reference Orientation	loyalty split between a specific agency and external constituencies; personal mobility and turnover	loyalty to the bureaucratic system rather than to a specific agency or its constituencies
8. Outcomes/Products	new programs based upon current theory; often discretionary; often short term	long term service programs with established clientele and constituencies

Succeeding chapters should also make it clear that while NIE and its predecessor research units at OE have suffered from some of the faults which Corwin attributes to the entrepreneurial bureaucracy as an organizational form, in many ways the entrepreneurial bureaucracy seems about as well suited to the predicament of educational research and dissemination as any organizational form could be.

Substantively, "the dissemination problem" had no clear or easy answer or set of answers around which one could build a manifestly coherent, well-articulated, and effective organizational structure or set of programs. "The dissemination problem" was intimately tied up with a broader problem which a large number of very bright people with a great deal of money at their disposal had been trying to solve for at least fifteen years -- how and to what degree social scientific research can improve educational practice.

Politically, "the dissemination problem" was also incredibly complicated and frustrating. During the first two years or so of the Institute's existence, the leadership tried out a style characteristic of the academy or of a truly independent research institute. Before that, USOE tried the highly centralized, rationalistic approach reputed to be in use in the Defense Department. Both failed to satisfy the insistent political demands they confronted. With all its abuses, entrepreneurial bureaucracy -- or some modified form of it -- may be about the best we can do.

One major weakness of the entrepreneurial bureaucracy results from what another study of NIE¹⁷ calls "fluid participation." Corwin referred to "temporary personnel." However one labels the phenomenon, the fact is that people who occupy crucial positions come and go quite rapidly, sometimes because they are tied to the political fortunes of the party in power, sometimes for personal or career advancement reasons. As a consequence, these agencies have extremely fragile institutional memories.

The fragility of NIE's institutional memory is nowhere more apparent than in the dissemination area. It is clear, for example, that the early leaders of the Institute had only the cloudiest understanding of the history of ERIC and the Pilot State Dissemination Program. Criticisms were leveled at ERIC which NCEC officials themselves had made much earlier and were struggling to respond to. Ideas were advanced as new -- some of the notions associated with the Local Problem Solving Program, for example -- which NCEC officials and their advisors from the university world had considered and rejected as impractical. It may well be that those who made or influenced policy in the new agency would have proceeded as they did even had they known more about the fund of experience already accumulated during the OE years. But it is reassuring to think otherwise. It is also reassuring to believe that those who have recently taken power in the bureaucracy will find the following history instructive.

Plan of Balance of this Volume

As noted near the beginning of this chapter, this volume offers an analytic history of dissemination at the National Institute of Education. To be more precise, it examines six programs which represented different positions on the dissemination question. One of these programs, the Educational Resources Information Center, was initiated long before NIE was created. Another, the State Dissemination Capacity Building Program, was a revised and modified version of the Pilot State Dissemination Program. Also initiated before the creation of NIE, the Pilot State program was developed by the same people who had developed ERIC. The remaining four programs addressed here were conceived and implemented by NIE.

The next four chapters trace the origins and evolution of the six programs. Chapter Two deals with ERIC, the most venerable and therefore the one with the longest story to tell. Chapter Three treats the State Dissemination Capacity Building Program, but in keeping with the tacit thesis of any analytic history -- that historical background is crucial to the examination of phenomena in the foreground -- the chapter devotes considerable attention to the Pilot State Dissemination Program, as well. Chapter Four includes both of the Local Problem Solving unit's programs, Urban Sites/DTA and the Teachers' Centers Exchange. Chapter Five deals with the Research and Development Exchange and the Research and Development Utilization Program.

The treatment of each program begins with a narrative history. Toward the end of the section on each program, some analytic commentary on the history is offered. The discussion of each program closes with an analysis of how the program defined the dissemination problem, what strategy or strategies for solving the problem it contemplated, what assumptions underlay the strategy, how the program actually worked out in practice, and what its history implies concerning the effectiveness of the strategy and accuracy of the assumptions.

One particular caution: throughout, this volume uses the term "assumption" to refer to a proposition that would have to be true if a program were to work. A program may be said to "assume," for example, that practitioners will seek out and use research reports in their original form. This does not mean that the framers of the program necessarily recognized that the program was predicated on this assumption -- though they may have done so. Nor does it mean that the assumption was made "unconsciously" in some Freudian sense. The attempt is not to psychologize, but to reveal the underpinnings of the program so that its assumptions may be compared with the realities revealed by the programs' actual experience. Assumptions, if you will, state the "hypotheses" of which the program may be viewed as a test.

The six programs make assumptions at two different levels, the micro level and the macro level. Micro-level assumptions have to

do with the conditions that are necessary and sufficient to effect improvement in classrooms, schools, and districts; with which of these conditions may be presumed to be in place in most local settings; and with which must be supplied through some form of direct or indirect federal support. For example, it may be assumed that all the elements necessary for improvement are already in place in most districts with the exception of knowledge of the most recent findings from research.

Macro-level assumptions have to do with the network of agencies and organizations through which missing but necessary conditions for improvement may be supplied to local educational institutions. For example, it may be assumed that state education agencies are both eager and able to help local school districts use research.

To varying degrees, all six of the NIE programs paid somewhat closer attention to micro-level processes than to macro-level processes. And there was a trend toward increasing reflectiveness concerning the micro-level -- a trend which culminated in the R&D Utilization Program's detailed statement of assumptions and in the almost continuous examination of underlying assumptions which characterizes writings published by the Teachers' Centers Exchange. Some programs did examine and state their own assumptions about the macro-level, but there is no discernible developmental pattern here. In fact, ERIC and the Pilot State Dissemination Program were at least as alert to their macro-level assumptions as were the two Local Problem Solving programs and the two School Practice and Service Division programs.

Now let us turn to the history.

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CHAPTER TWO: THE EDUCATIONAL RESOURCES INFORMATION CENTER

ERIC is the graybeard of federal educational dissemination programs, with a formal history of sixteen years and an active pre-history of at least seven more. The program's time in the sun, the time when hopes and rhetoric focused on ERIC as the answer to the problem of getting research into use, has come and gone. For approximately nine years now, the program has seen little or no expansion, and changes in its operation have been largely technical in nature. Yet, ERIC continues to acquire, process, and provide access to the voluminous literature of research and related resources in education. And because the story of ERIC's rise and fall from bureaucratic grace turned upon the clash of rival images of how research might affect practice in education, to understand something of ERIC's history is to understand a good deal about the actual and potential role of the federal government in this area.

This chapter begins by describing how a certain view of the problem facing USOE's Media Research program, existing associations among people within and outside of the government, previously developed solutions to apparently similar problems, bureaucratic momentum, political circumstance, and a variety of stated and unstated assumptions combined with personal initiative to create ERIC. It then traces ERIC's early evolution through the first stirrings of an educational extension agent program using ERIC as its primary information base, the challenge of a Rand Corporation study pointing to weaknesses and offering alternatives to the existing system, the program's collision with the newly established National Institute of Education, and its fate and functioning within the Institute. The chapter closes with some interpretation of the program's history, followed by an analysis of its core assumptions.

The Origins and Creation of the ERIC System: 1959-1964

Only on rare occasions . . . has the basic idea for an information system come from the grassroots of the user population Usually . . . federal information systems originate totally within the federal structure; in fact, the originators are likely to be those that know the subject area, are familiar with libraries and information systems, and are intimately acquainted with the federal agency's personality and organizational structure. Such people build federal information systems. So it was with ERIC.¹

The concern that eventuated in ERIC first arose in 1959 in the Educational Media Branch of USOE's Division of Statistics and Research Services. USOE's sponsorship of research on the uses of new media for educational purposes -- funded under Title VII, Part A of the National Defense Education Act (NDEA) -- had produced a flood of reports and other documents. And all the while, more and more proposals poured in. How were OE officials to evaluate new

proposals when it was virtually impossible to keep track of, much less to assimilate, the recently completed research? NDEA had created a sorcerer's apprentice in the Media Branch.

This condition apparently also afflicted the Media Branch's sister -- The Cooperative Research Branch. But Media had one additional problem: a dissemination mandate. Part B of NDEA Title VII had directed the Office of Education to disseminate information concerning research on new uses of media for education, as well as information on new programs and practices employing media. More specifically, Part B called for "(1) studies and surveys to determine need, (2) catalogs, reviews, bibliographies, abstracts, analyses of research and experimentation to encourage more effective use, and (3) advising, counseling, and demonstrating to state and local educational agencies and institutions of higher education."²

How did NDEA Title VII come to include a dissemination provision while such a provision had been omitted from the Cooperative Research Act of 1954 and was also omitted from NDEA Title VI, which called for research and development in foreign language instruction? According to Dershimer, the original draft of NDEA contained no such provision. Congressional staff were prompted to draft Title VII late in the legislative process by lobbyists from the audio-visual industry. Neither the Secretary of HEW, nor the Commissioner of Education, nor any educational researcher testified in support of the Title. Nevertheless, it was incorporated into the Act.

Stated simply, then, the line of events leading to the Media Branch's problem ran like this: Sputnik aroused Congressional concern about the nation's ability to compete with the Soviet Union. A bill to ensure a competitively educated population was drafted. The audio-visual industry successfully lobbied for inclusion of a program of research on the uses of educational media, and for dissemination of this research and of new methods of using media. The Congress passed the bill. The Media Branch invited proposals and funded research projects. The research was carried out, and reports turned in. More proposals were submitted all the while. To enable them to evaluate the incoming proposals with confidence, proposal reviewers hired by the Media Branch asked what projects had already been funded, with what results. The Branch had no ready way to respond. In fact, it had no adequate system for keeping track of the reports submitted by funded projects, to say nothing of providing ready access to reports bearing on specific topics. Media Branch officials recognized that such a system would also be useful to researchers preparing proposals.

To develop such a system, late in 1959 the Media Branch turned to two members of Columbia University's School of Library Service, Maurice F. Tauber and Oliver L. Lilley. Tauber and Lilley conducted a "Feasibility Study Regarding the Establishment of an

Educational Media Research Information Service." In their May 1960 report, they offered this formulation of the problem:

The increase in research in areas of educational media . . . has been accompanied by a growing problem of effective dissemination of findings from research to the wide range of individuals interested in the results. The many sources of publications and information, as well as the categories of individuals concerned with this body of research, are so varied that it has become relatively difficult to identify and locate material promptly and satisfactorily. The problem became more pronounced to the administrative offices of the Educational Media Branch of the U.S. Office of Education who were faced with the problem of evaluating research proposals being submitted for grants under Title VII, Part A, of the National Defense Education Act. As funds available for research in educational media expanded, the matter of an adequate and prompt information service on past and current research suggested the need for a systematic study of the problem.³

Here the problem of dissemination is construed primarily in terms of the difficulty of identifying and retrieving relevant material, a difficulty produced by the proliferation of information sources and the expanding range of people with an interest in the information. And the particular people with the biggest problem were Media Branch officials.

In conducting their study, Tauber and Lilley began with a list of articles, reports, and other references which an earlier study had identified as important within the field of educational media. They then searched for these titles, using standard bibliographic tools in educational research (e.g., indexes to periodicals, journals of abstracts, bibliographies). About seventeen percent of the titles appeared in none of these resources.

The second part of the study was a questionnaire survey of media researchers to determine how satisfied they were with the available bibliographic resources. While preparing to conduct the survey, Tauber and Lilley sat in on a meeting of a group convened to review proposals submitted to the Media Branch, discussed issues related to the questionnaire with the proposal evaluators, and went on to "examine actual studies, for the purpose of isolating the nature of the terminology employed in the presentation of projects to the Educational Media Branch." The proposal evaluators subsequently reviewed and critiqued the questionnaire. The survey revealed considerable dissatisfaction with available bibliographic resources.

In all, although Tauber and Lilley framed the problem they were addressing to include dissemination of research to a "wide range of individuals," it is difficult to escape the conclusion that their primary point of orientation was "the problem of evaluating

proposals" which faced Media Branch officials, with a secondary emphasis on the problems faced by the researchers submitting proposals. It was these two categories of "interested persons" with whom Tauber and Lilley communicated -- not classroom teachers, curriculum specialists, school administrators, or any of the other potentially "interested persons" in or around the education system.

This is not to suggest that there was anything particularly perverse or wrong-headed about this orientation to the needs of federal officials and the researchers whose work they supported. These groups had real needs and if the government was going to spend large sums on media research, meeting these needs was important. The point is that the orientation was fateful. It reinforced a predisposition to focus on one aspect of the dissemination problem and to treat this aspect as though it were the whole problem.

To appreciate the influence of this initial orientation, in reviewing the history of ERIC it is useful to ask, what if two classroom teachers selected for their interest in using new media had been assigned the task of defining the Media Branch's dissemination problem? What if, in preparing their report, they had talked with large numbers of classroom teachers? How would these hypothetical teachers have defined the problem?

In their May 1960 report, Tauber and Lilley recommended establishment of a Media Research Information Service, a small, in-house operation with three professionals and two support staff members. They recognized that the problem of gathering, organizing, and providing access to educational research was scarcely unique to the media field, but they judged a comprehensive information system too formidable to establish in one stroke. The modest Media Research Information Service would be a manageable first step.

Thomas D. Clemens, a newcomer to the Media Branch and the Project Officer for the study, found Tauber and Lilley's recommendation too cautious. He discussed the need for a comprehensive information service with David Clark, then Acting Director of the Cooperative Research Branch. Clark agreed that such a system was needed. To develop a plan for the system, Clark and Clemens set up a Divisional Committee on Research Information Services, consisting of representatives from each branch of the Division of Statistics and Research Services. The committee met frequently and sought advice from a number of people with experience in information systems, especially in scientific and technical fields. Consulted -- and sometimes visited -- were the organizations and agencies listed in Figure 2.

Figure 2

Organizations and Agencies Consulted by the
Divisional Committee on Research Information Services⁶

Bio-Science Information Exchange

CATE Program, Air Research and Development Command, Andrews AFB

Center for Applied Research in Education, Inc.

Center for Documentation and Communication Research, Western
Reserve University

Division of Academic Research and Services, Pennsylvania State
University

Documentation, Inc.

Education Research Information Service, Texas Education Agency

Electronic Retrieval of Law Demonstration, University of
Pittsburgh

National Bureau of Standards

National Science Foundation

National Security Agency

As a result of their meetings, consultations, and visits, the Divisional Committee concluded that there was in fact a need for "a central point in the United States where all educational research information is available," argued that people already looked to the Office of Education for such information, and recommended that USOE provide the service.⁴

The service proposed by the Committee would collect research, statistics and surveys, and information on laws and court decisions affecting education. Service would be free to all clients, including government personnel, researchers, libraries, educational institutions, and professional educators. And it would provide abstracts, indexes, bibliographies, and reference services upon request as well as periodically. The service would gear up in phases, first dealing only with reports from Cooperative Research Projects and from current research in media and library services, then gradually extending to education research more broadly. Statistical information and legal references appear to have been lower priorities.

Appended to the memorandum containing these recommendations -- addressed to the Assistant Commissioner for Research and dated September 1960 -- was an "unsolicited" proposal submitted by Western Reserve University's Center for Documentation and Communication Research (CDCR), one of the organizations consulted by the Divisional Committee. The proposal offered an exploratory study to develop guidance for an educational research information system. According to Trester, "The Center had already developed operational machine searching services in the areas of metallurgy, physics, inorganic chemistry, mechanical engineering, and geology."⁵ In April 1961 the proposal was funded, and the Divisional Committee continued to meet with Principal Investigator Allen Kent and their CDCR staff members throughout the life of the project.

The final report of the project, submitted in June 1962 and entitled, The Library of Tomorrow -- Today, identified "the information explosion" as the root of the problem to be addressed. Various government actions, including the space race and other science-based programs, had contributed to exponential growth in hard-science knowledge. This knowledge explosion had posed an unprecedented challenge to the library, which required an ally: the information center. Such a center performed many of the functions of the library but was far more specialized. In response to the growth in research, the government had also sponsored development of new methods of documentation, and this had greatly accelerated development of mechanized information retrieval systems.

Now a similar explosion had developed in the social sciences. But these "soft" sciences presented many special problems. Research results appeared in a profusion of different publications; there was considerable delay between the performance of research and its publication in any accessible source; the potential uses of social research were difficult to anticipate; indexing was complicated by the imprecision and lack of standardization in terminology; and while the natural flow of knowledge was within disciplines, there was an increasing need for interdisciplinary search capabilities. Education was perceived to have all of these problems, the last with special force.

To cope with the information explosion in educational research and with all its attendant special problems, Allen Kent and his associates at CDCR developed a prototype Educational Research Information Center, the first major mechanized information storage and retrieval system in a "soft" subject field. CDCR acquired a collection of 4,000 documents (half related to educational media and half on other topics), abstracted and indexed them, stored the files on magnetic tapes to permit rapid searching, pilot-tested the system with real questions submitted in response to advertisements in a broad range of journals, and developed recommendations for making the system operational. Each step -- acquisition, analysis (including abstracting), terminology control (problems related to indexing), providing a search mechanism, and carrying out the searches -- entailed technical problems that were surprisingly complex and which CDCR addressed in an impressively systematic manner.

On the basis of the pilot project, Kent and his associates offered detailed recommendations concerning the function, structure, and operation of ERIC. "ERIC could function both as a primary information agency to serve individuals directly, and as a central acquisitions and processing agency to supply other agencies or institutions with processed files for local exploitation."⁷ Accordingly, ERIC services would include searching for bibliographic references related to common problems or questions, searching in response to questions specified by individuals, copying indexed files for local libraries and other institutions, and reproducing abstracts and source documents to stock local institutions.

Trester (1980) maintains that an orientation to the user's point of view pervaded the CDCR project. So far as it goes, this is certainly true. But repeatedly throughout the report, Kent and others give indications that researchers were the primary (though not exclusive) users they had in mind. When practitioners or non-educators are considered as potential users, they are expected to behave as researchers would.

Given this image of the probable user of the system, it seems reasonable to make certain assumptions:

- that the user has the motivation to acquire and use research results
- that the user has the skills to retrieve and analyze research reports
- that the user has the skills to synthesize diverse and sometimes conflicting research results
- that the user has the skills to translate research into action or new R&D products
- that the user has the time to do these things.

So long as ERIC was put forward as a solution to the problems faced by federal officials, researchers, and certain other specialists, these assumptions probably held true to a substantial degree. But as ERIC was apparently offered more and more as an independently adequate response to problems faced by practitioners, the assumptions become increasingly questionable. With a long history of work in hard science and engineering fields, where users of information services probably do generally possess these attributes, CDCR might have been expected to presume them among this new set of users. Compared with claims made later, however, CDCR's claims were really quite modest:

ERIC will be able to furnish information to individuals engaged in pure research. And it will also be able to furnish information to individuals who are charged with the task of establishing and presenting guidelines for application in teaching and administration.⁸

According to Trester, the design for ERIC developed by CDCR was accepted as "official," including the designation of 1964 as the projected time for the center to become operational. The Media Branch continued to fund development work by CDCR for several years. But from submission of The Library of Tomorrow -- Today in June 1962 until spring of 1964, no other major steps were taken toward operationalization of ERIC. In April 1964, OE Commissioner Francis Keppel announced a reorganization of the Bureau of Educational Research and Development, including creation of a Division of Educational Research, with ERIC as a branch.

The Growth and Development of ERIC: 1964-1969

ERIC came into existence as a bureaucratic unit in the spring of 1964 but operated with a minimal budget and very small staff until the passage of the Elementary and Secondary Education Act a year

later. Nevertheless, the first year of operation saw several significant developments:

- By fall, it had become clear that the breadth and diversity of the educational research field demanded decentralization of ERIC. ERIC would have to rely on other parts of USOE, universities, and commercial contractors to index and abstract segments of the literature for which they had special expertise. ERIC Chief Harold Haswell and Frederick R. Goodman, a University of Michigan professor on whom Haswell relied for conceptual help, began to think in terms of a decentralized system for acquisitions and information processing.
- The coordinate indexing system still in use by ERIC was chosen over the semantic coding approach advocated by the CDCR at Western Reserve. The judgment was that (1) semantic coding was more appropriate for deep indexing of very rich segments of a well-defined literature than for the vast and diffuse literature of education, (2) semantic code required too high a skill level in searchers and too much communication between the searchers and users, and (3) coordinate indexing was a surer bet because nearly all other large government information services used it successfully.
- The responsibility for preparing "trend studies" -- summaries and analyses of the literature on current problems -- was written into ERIC's mission statement. It had been assumed for some time that periodically ERIC would issue packaged bibliographies on standard topics and topics of special interest; but the notion of drafting original analytic text was a new one. As Trester has noted, the apparently modest addition of "trend studies" to ERIC's repertoire represented a potentially major change in the system. As we shall see, however, it is not clear that the information analysis program implicit in the trend studies idea actually ever realized its full potential.

In contrast with the modestly significant developments of its first year, ERIC's second year brought the confluence of the two events that eventually transformed it from a small operation within the bureaucracy into the major information system it remains today.

In January of 1965, the flamboyant Director of the Division of Educational Research, Francis A. J. Ianni, hired as Deputy Director his stylistic opposite, Lee G. Burchinal. "Fritz" Ianni stories persist to this day within the bureaucracy. One old hand recalls that while three-piece suits and silk ties were standard attire for Ianni, when Fritz had a special appointment, for a touch of extra flair, he would add a boutonniere and spats.

With a background in systems theory, as a full-time researcher in the agricultural experiment station and a member of the faculty at Iowa State, Burchinal had studied a varied array of problems before joining the Social Welfare Administration, from which Ianni hired him. By contrast with Ianni, Burchinal was downright austere. Contrasting appearances notwithstanding, Burchinal was later to demonstrate a flair for the politics of program-building that paralleled Ianni's.

As Burchinal recalls, Ianni had little familiarity with and less interest in the technical details of ERIC.⁹ (Ianni's priority at the time Burchinal came on board was developing a series of educational R&D Centers, the first two of which were funded in 1967. As noted in Chapter 1, the centers were conceived as responses to criticism of education research for a predominance of small, mediocre studies of trivial topics. The centers would draw better minds and mount studies sufficiently ambitious to yield compelling responses to major current problems and issues. In addition to all of the operational problems entailed in putting together such a program, Ianni also had to deal with skepticism from the Bureau of the Budget (BOB) and the Office of Science and Technology (OST). As William Cannon of the BOB later recalled, "We didn't see the R&D Centers as being good enough. We were thinking of other kinds of institutions even before the Gardner Task Force."¹⁰ (BOB and OST preferred major figures from the physical sciences, and believed that people of this stature should be supported through a few national centers of excellence.)

Burchinal remembers Ianni telling him, "There's a little outfit called ERIC, and I don't want to worry about that. Do whatever you think has to be done about it as long as you don't create problems." The chief concern at that time, Burchinal says, was to keep abreast of final reports, so that if the Congress called upon the Division to demonstrate competent management of the research enterprise, the Division could respond promptly. This entailed, in part, providing ready access to the literature to "whoever might want it."

Reviewing the program, Burchinal concluded that the small, internal operation had potential but was outmoded in various operational respects (e.g., the use of optical coincidence card equipment rather than computers with magnetic tape) and needed a good deal of further conceptualization. With ERIC Director Haswell and consultant Fred Goodman, Burchinal worked out the notion of a decentralized network of clearinghouses as a way of capitalizing upon existing centers of expertise and collections in different subject areas. ERIC would establish general guidelines and orchestrate the system, but would leave each clearinghouse considerable discretion to decide what to acquire, index, abstract, and enter into the system. This discretion was an attractive feature to the people in the higher education community whom Burchinal and Haswell were trying to involve. (Given Burchinal's political sensitivity, it may be assumed that he recognized the support-building advantages of a decentralized system as well as its technical advantages.)

Before much progress was made toward realizing Burchinal's new vision of the program, however, the second major event of 1965 that shaped ERIC's development occurred -- the Elementary and Secondary Education Act was passed in April. The pace and scale of virtually everything in USOE was doubled and redoubled immediately, presenting unprecedented problems and opportunities for Burchinal, ERIC, and just about everyone in the agency.

Interestingly, nearly all of the Johnson administration's top policymakers agreed that the Office of Education wasn't up to the job of implementing ESEA. At the very signing of the Act, President Johnson announced appointment of a task force to develop a plan for reorganizing the agency, reforming its administrative and fiscal systems, and improving the quality of its personnel.

In June, task force chairman Dwight A. Ink -- brought in from the Atomic Energy Commission -- unveiled the plan. It called for a deep, thoroughgoing reform of USOE. The reorganization affected ERIC most directly by making the program part of a Division of Research Training and Dissemination within the new Bureau of Research. Burchinal became Division Director.

Now the conditions were laid for ERIC to burgeon into the large-scale comprehensive information service it is today. The huge expansion of resources brought by ESEA furnished the opportunity, Burchinal was positioned to exploit it, and he had the drive and skill to do so. "At first I didn't realize the full opportunity," Burchinal recalls. "But OE was ripe. There was a tremendous need for somebody to handle the research management problem, to get research into people's hands. I saw ERIC as the vehicle for that and decided to push it for all it was worth. Fritz Ianni agreed, and I started to move."11

Fortunately for Burchinal, the program had already won favorable notice thorough a rapidly mobilized effort to get information on education for the disadvantaged out to the people who had to implement ESEA. "Operation Fingertip," conceived by ERIC Director Howard Haswell and approved by Commissioner Keppel immediately after ESEA was signed, collected information on more than a hundred programs for disadvantaged students, packaged it, and distributed packets to 50 state boards of education, the 100 largest cities, and one school district at random from each Congressional district. ERIC received a substantial number of grateful testimonial letters, which doubtless confirmed program officials' belief in the utility of the print information they had distributed. The letters were also useful advertisements within the bureaucracy.

ERIC lacked a specific authorization and accompanying line item in the appropriations process, so Burchinal "tapped, cajoled, and persuaded" program managers from all across USOE to contribute funds, offering to match their contributions with the Cooperative Research funds he already had and to use the combined dollars to handle collection and dissemination of research within their spheres. Difficult and speculative as this process proved, it was

nonetheless easier to get dollars to mount a major information system by contracting work out than it was to get personnel authorization -- "slots" in the bureaucratic vernacular -- to staff such a system internally. Authority to hire staff went to the large, legislatively mandated programs, not to a small discretionary unit like ERIC.

As it happens, the decentralization which this situation favored was consistent with the system conception emerging from discussions among Burchinal, consultant Fred Goodman, and ERIC Director Haswell. An ERIC mission statement which Burchinal presented to top USOE officials reflected this conception:

The mission of ERIC is to create an educational research documentation network linking together the universities, professional organizations and other documentation efforts of the education community. The component units will select significant research documents for inclusion in a centralized subsystem, which will be managed by ERIC to perform retrospective searches and various notification routines to OE personnel, researchers, and research-oriented endeavors. Specialized documentation services will also be offered upon agreement with other OE units to support specific laws, or OE projects.

The component units will be coordinated and, in some instances, created from OE funds in such a way that the entire field of educational research will receive extensive documentation. All OE contracts involving information retrieval processes relative to research literature should be processed by ERIC and subject to ERIC supervision from a technical point of view.¹²

But as the mission statement indicates, Burchinal had in mind decentralizing input to the system (acquisition, selection, abstracting, indexing), not the operation of the system to provide retrieval services. He and other ERIC policymakers continued to think in terms of the existing large, sophisticated federal information systems. They visited and studied the National Library of Medicine's computerized MEDLARS System, the Defense Documentation Center, and systems at the Atomic Energy Commission, the National Aeronautics and Space Administration, and other engineering and "hard science" systems. All of these, Burchinal recalls, were operated in-house or in one quasi-governmental installation. Professional information scientists were skeptical that quality and adequate control could be maintained in a decentralized system of clearinghouses. Any further decentralization would be still worse.

Even though "the smart money was against it," Burchinal decided to go with this "radical departure" in the field. The difficulty of getting slots, together with difficulties in finding expert people for the slots he did have, meant that it was either a decentralized system or an in-house unit far too small for Burchinal's vision and ambitions.

Before specifying how this conception was operationalized in contracts, I wish to pause briefly to call attention to some features of the mission statement quoted above:

1. USOE is portrayed as one among many members of "the education community." Other members are perceived to be performing already some of the functions ERIC wants to promote. So ERIC's role is to create a network among existing centers of documentation (universities, professional organizations, etc.). Only in "some instances" will the "component units" be created with OE funds.
2. The "component units" will select documents to feed into central ERIC. They won't submit everything they can locate within their fields. According to Burchinal, Fred Goodman referred to the clearinghouses metaphorically as "knows cones." By this NASA-inspired expression, Goodman meant that each clearinghouse would have a comprehensive store of information, with a broad base of good ideas, promising practices, etc., and a tip of solidly scientific research. Only the tip of each "cone" would go into ERIC.
3. The intentions to offer specialized services to other USOE units and to take responsibility for all information retrieval contracts reflect two sides of the bureaucratic situation in which ERIC found itself. Lacking line authority over other units, ERIC must market its services as part of Burchinal's effort to "cajole, persuade, and tap resources."

Seeking "responsibility" for all information retrieval contracts was very likely an attempt to get a foot-hold from which to group such authority de facto. The Commissioner never endorsed this claim. So cajoling and persuasion necessarily remained the primary modes of relating to other programs.

To return now to the implementation of Burchinal's decentralization strategy, in November of 1965 ERIC let a contract for the Educational Document Reproduction Service. The EDRS began to produce microfiche and "hard copy" reproductions of ERIC entries not available from commercial sources. These copies of original documents followed bibliographic citations and abstracts as outputs of the system. Although there have been changes in the EDRS contractor and technical changes in its operation over the years, this component of the system continues to carry out essentially the same functions in the same general manner as it did at the inception.

In December of 1965, the original Request for Proposals to set up ERIC clearinghouses was issued. The premise of the RFP was this:

Development of a decentralized system using specialized documentation processing centers rests upon the conviction that persons knowledgeable in a given substantive area of educational research should decide what documents are of sufficient value that they should be distributed nationally. Thus, acquisition and selection of documents is carried out by various clearinghouses, each of which has the responsibility for a given substantive field of research.¹³

Accordingly, bids were invited for clearinghouses in a large number of "current critical areas in American education":

Administration	Handicapped Children
Arts and Humanities	and Youth
Community Colleges	Learning Processes
Disadvantaged	Library
Early Childhood Education	Mathematics
English	Media
Facilities	Natural Science
Foreign Languages	Reading
Gifted	Small School Systems
Guidance and Counseling	Social Sciences/Social Studies

With a detailed justification, an offeror could propose a clearinghouse in some other area.

Clearinghouses were to acquire, select, process, store, retrieve, and disseminate documents within their subject areas. They were to concentrate upon the "fugitive literature" -- reports and other documents not readily available through journals or commercial publishers. They were also to produce "state-of-the-art papers," a new term for the "trend studies" mentioned earlier, but this function received slight attention.

Each clearinghouse was to establish an advisory board consisting of practitioners, representatives of appropriate professional associations, and researchers in the subject area. The advisory board would help develop guidelines for the operation of the clearinghouse, and perhaps more importantly, would weave the clearinghouse into the web of networks through which researchers and practitioners were thought to communicate.

This effort to develop tight connections with established associations and networks appears to have been both practically and politically motivated. Practically, the networks seemed useful for keeping abreast of developments in research and for communicating results to researchers and practitioners. Politically, they could help this program with no mandate and no obvious constituency to develop the support it would need to hold up in the annual competition for an expanding budget. For a time,

this may have worked, but association with what some perceived to be bastions of old guard mediocrity would become a political liability after the creation of NIE in 1972.

Two clearinghouse proposals were submitted in January, presumably because the offerors had been members of an ad hoc committee with whom ERIC officials had consulted liberally. These received contracts on March 1; ten additional contracts were awarded on June 1, 1966.

Approximately a year later, six more clearinghouses were established. After this, only three more were set up; one in 1968 and two in 1970. As ERIC has evolved, the contractor or organizational home for various clearinghouses has changed, and the number of clearinghouses has fluctuated for budgetary reasons. Expertise has accumulated, and policies and procedures have gradually stabilized. But the basic structure and functions of clearinghouses have remained essentially constant through all of these changes.

In the progressive decentralization of ERIC, the final major functions to be contracted out included (1) entering the bibliographic citations and abstracts from all clearinghouses onto magnetic tapes for storage, (2) developing a thesaurus of key terms used by clearinghouses to tag documents in their areas and by searchers retrieving information, and (3) the performance of other functions intervening between the input from clearinghouses and the output of copies of source documents by the Educational Document Reproduction Service. With the award of a contract to perform these functions (to the Space and Information Systems Division of North American Aviation) in May 1966, Central ERIC had farmed out virtually the entire operation of the system, retaining only policymaking, administrative, and funding functions for performance within the government. In addition, developing and operating a searching system was picked up by the private sector. The strategy of decentralizing in order to cope with limitations on personnel authorization and with the difficulty of hiring people with appropriate research and technical expertise had passed from conceptualization into initial implementation. The system had taken the form that persists essentially intact to the present day.

During the balance of the years 1966-1970, the monthly journals Resources in Education and the Current Index to Journals in Education were initiated, and an infinity of operational policies and procedures were worked out. But the main story of the period is one of tremendous budgetary growth as ERIC secured the funds to support the decentralization of the system. As the chart below indicates, growth was steady until 1969, when it leveled off. The first year of the new decade brought a substantial reduction.

After describing the fully formed system in the next section, we shall return to the story of that budget cut and the crisis it provoked.

FY1966	FY1967	FY1968
\$1,999,320	\$3,086,694	\$2,896,281

FY1969	FY1970	FY1971
\$4,750,000	\$4,626,128	\$3,815,000

The ERIC System: A Brief Description

Before proceeding with the history of ERIC, let us pause here to describe the current structure and functioning of the system created by Burchinal, Clemens, and their associates. Some changes in the system have been made at NIE, but as we shall see, these have been largely in the routine of technical adjustments and improvements.

According to a recent program document, "ERIC is a national information system...for providing ready access to descriptions of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs."¹⁴ Central ERIC -- now a unit of the National Institute of Education -- funds, sets policy for, and monitors the whole system.

Sixteen clearinghouses -- located in universities and professional associations -- acquire, select, abstract, and index documents in their assigned subject areas. They handle two categories of literature. "Journal literature" includes articles which appear in scholarly or professional periodicals and which are therefore reasonably accessible to potential readers. "Report literature" or "fugitive literature" consists of reports of federally sponsored research, proceedings of conferences, unpublished papers or manuscripts, and other documents that are not so readily available to the profession. Clearinghouses also prepare "information analysis products" such as bibliographies, descriptive reviews of the literature, and state-of-the-art papers.

Clearinghouses send their indexes and abstracts of journal literature to a commercial contractor for publication in the Current Index to Journals in Education. CIJE is a monthly guide to over 70 education-related publications. The contractor also publishes cumulative indexes twice a year.

The processing of reports or "fugitive" literature is a bit more complicated. Indexes, abstracts, and copies of documents go from all 16 clearinghouses to a central contractor, known as the ERIC Processing and Reference Facility. The Facility contractor readies the indexes and abstracts for publication as the monthly Resources in Education (RIE), which is actually printed and distributed to subscribers by the Government Printing Office.

As for the "fugitive" documents themselves, the Facility contractor forwards these to the ERIC Document Reproduction Service, which reproduces the documents in two forms -- microfiche (small microfilm cards) and "hard copy" (conventional photocopies).

The Facility contractor also transfers the RIE and CIJE indexes and abstracts onto magnetic tapes to permit computer searching of these files. Updates of the tapes come out regularly. About 60 organizations purchase the tapes by subscription. Most mount the tapes onto computers for their own use, but six of them in turn sell subscriptions through which any organization or individual with a computer terminal can search the file.

Finally, the Facility contractor creates satellite files, quality control processes, and retrieval and operational management tools.

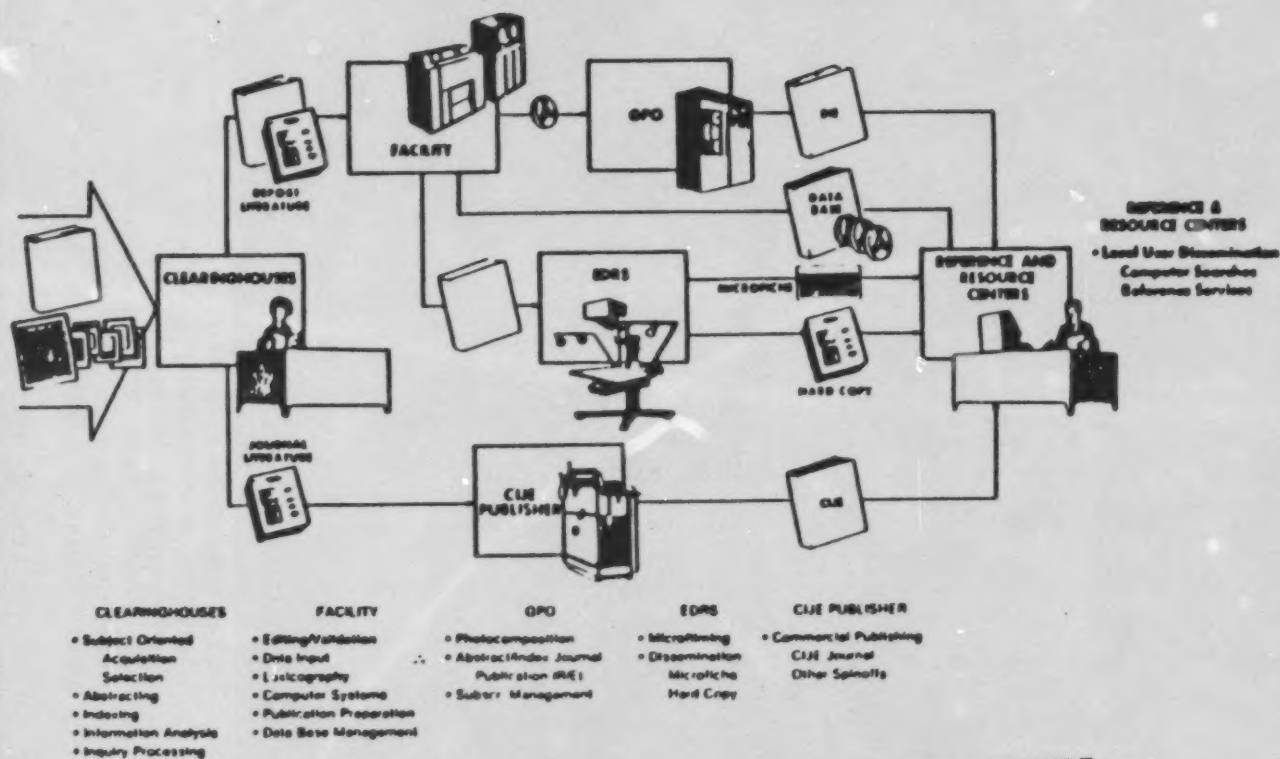
Most people who use ERIC do so through a library or information center. A user identifies potentially relevant literature by searching RIE and CIJE manually, or -- more efficiently -- through a computer search. On certain popular or especially significant topics, clearinghouses may have prepared bibliographies or literature reviews. For copies of journal articles, the user must either rely on the library's collection of periodicals or write to the journal for a reprint. For report literature, in most libraries the user may turn to the microfilm collection for a copy that is readable with the aid of a microfiche reader. The library may also have some documents in hard copy. Alternatively, the user may purchase microfiche or hard copies from the ERIC Document Reproduction Service.

Figure 3 summarizes in a schematic view the description of ERIC presented here.

Figure 3: A Schematic Representation of the ERIC System

(Reproduced from How to Use ERIC, an undated NIE publication.)

ERIC is a system with four levels.



1969-1972: Reorganization, Rude Shocks, and Retrenchment

In August of 1969, President Nixon's new Commissioner of the U.S. Office of Education announced a reorganization which folded much of the Old Bureau of Research into a National Center for Educational Research and Development. Commissioner James Allen said resulting improvements in coordination would "encourage more effective linkages within the education system among the processes of research, development, evaluation, demonstration, and dissemination as a means of accelerating the widespread application of improved methods and practices."¹⁵ Shortly thereafter, Lee Burchinal was named Acting Assistant Commissioner for the dissemination unit, ultimately called the National Center for Educational Communication (NCEC).

The reorganization and new appointment broadened Burchinal's scope of action, but it also foreshadowed difficulties for ERIC and indeed for all of educational R&D. The reorganization appears to have been a response to ubiquitous criticism of OE's handling of research. Congresswoman Edith Green's 1967 investigation had found the Bureau slow, bungling, and inept. In 1969 when Burchinal's boss, James Gallagher, visited Warren Magnuson, Chairman of the Senate Appropriations Subcommittee for DHEW, Magnuson's attack on educational R&D was so virulent that Gallagher "could hardly finish a sentence."¹⁶ Within HEW, a set of task forces commissioned by Secretary Finch to recommend priorities found "little enthusiasm" for OE's program of research.

In the White House, the Office of Management and the Budget, and the Office of Science and Technology was a network of people who had long criticized the Bureau of Research. Daniel P. Moynihan and his assistant Chester Finn now brought to the White House the view that research in education had proved "inadequate, probably incompetent, and certainly disappointing."¹⁷

In the shadow of such criticism, if a broadened scope of action was a blessing, the blessing wore a fiendishly clever disguise. Apparently undeterred, Burchinal accepted the position and told his ERIC colleagues that his new unit would focus on effecting actual change in educational practice. For this purpose, ERIC could contribute a knowledge base but was not itself sufficient. One way ERIC clearinghouses could make themselves more useful was to improve and expand their information analysis activities -- annotated bibliographies, collections of abstracts, and syntheses of research on problems of practice. Burchinal asked all clearinghouses to review their programs, but found the resulting reports a virtually complete disappointment. Accordingly, the contemplated expansion of the information analysis programs came to nothing more than a token addition to each clearinghouse's budget. Based on the premise that ERIC was a necessary but not sufficient element in a larger effort to improve practice, in the

spring of 1970, NCEC launched a Pilot State Dissemination Program. The Request for Proposals for the program explained it thus:

The idea behind this program is simple: without a chain of interpersonal communication links through which validated information can pass effectively, major educational improvements, no matter how well tested, generally will not become widely known or adopted. The Office of Education wants to assist several SEAs to develop some pilot approaches designed to test ways of helping local school personnel to learn about, choose among, and, if appropriate, adopt or adapt tested educational innovations. The pilot efforts will represent ways of maximizing interpersonal communication as a means of effecting educational improvement.¹⁸

We will reserve the full story of the Pilot State Program for the next chapter. The point here is that the pressure was to achieve and demonstrate actual improvement in local educational practice, not simply to make research accessible, and Burchinal and his colleagues recognized that ERIC could not do this job alone. A passive information exchange was not sufficient to effect practice improvement.

Burchinal created the Pilot State Program partly for this reason and partly to build a political constituency for ERIC.¹⁹ He recalls the "grinding annual battle" for a budget to support ERIC, a battle which categorical programs with specific Congressional line items could win by marshalling support from the beneficiaries of their largesse. Burchinal says he noted state education agencies' increasing prominence in implementing federal legislation and regulations, saw President Nixon moving toward revenue sharing notions that would make states still more central, and reasoned that Chief State School Officers would be a powerful source of support.

Before this strategy could play out, however, the widespread skepticism about the value of educational R&D reported earlier resulted in ERIC's first significant budget cut. The Senate Subcommittee on Appropriations reduced the administration's request, and the eventual loss came to \$800K, or about 17%.

After considering a number of options to effect the necessary reductions in clearinghouse budgets, all the while coping with mail and telephone pressure campaigns apparently orchestrated by clearinghouse directors concerned to protect their operations, NCEC officials chose an across-the-board cut along with consolidation of two clearinghouses.

Recognizing that his budget difficulties were likely to persist, and still conscious of the need to orient NCEC to improving educational practice, Burchinal took three actions almost simultaneously. He set up a Dissemination Advisory Committee to

review the existing program and make recommendations; he established an ERIC Management Review Group to look at Central ERIC's management of the system; and he commissioned two Rand Corporation researchers to design "exemplary alternative models for the ERIC clearinghouse network that could render ERIC more responsive to the needs of the education community."²⁰

In a report submitted in the fall of 1970, the Dissemination Advisory Committee expressed strong support for the new emphasis on practice improvement:

The shift in emphasis at NCEC from the dissemination of information to the spread of improved practice means to the committee that ERIC can no longer be the center of the system. While the spread of improved practice can unquestionably be enhanced by distributing information about practice, the modification of practice of course requires more than the transmission of information. Research results are transmitted by documents; practice is not, although document production, storage, and retrieval are necessary.²¹

The ERIC Management Review Group (composed of eleven representatives from research firms; universities; state and local education agencies, the National and Great Cities Research Council, and NASA) made over a dozen recommendations. A number were modest suggestions for improved operations (e.g., put policy guidelines into a written manual, monitor more systematically, stabilize budgets, regularize allocation of resources among functions). But several addressed particular issues raised by the emergent shift toward practice improvement:

● Practitioner vs. Researcher as Audience

The Review Group recommended that Central ERIC specify the relative emphasis to be placed upon practitioners versus researchers as audiences for ERIC products and services. While researchers might be satisfied with bibliographic tools and access to documents, practitioners would seem to require more summary and interpretation. New limits on resources made this choice more crucial. Nevertheless, Central ERIC made no clear choice on this point.

● Guidelines for Information Analysis

If serving practitioners assumed a higher priority than previously, Central ERIC needed to provide some guidelines concerning the production of information analysis products. These should not simply establish the priority to be accorded these products, but should specify context, format, level of analysis, writing style, and the like. No such guidelines were forthcoming.

- Report Literature versus Curriculum and Teaching Materials

Again, the practice improvement goal seemed inconsistent with ERIC's traditional emphasis on research reports. Although it is not clear that an explicit decision was made immediately, according to Trester, there has been a gradual trend toward more practitioner-oriented materials over the history of ERIC.

- Retailing versus Wholesaling Information

In addition to their responsibilities for acquiring, abstracting, and indexing material in their respective topic areas, clearinghouses were also charged with providing direct research services to clients within their regions. Because Burchinal had long advocated "wholesaling" information through university libraries, state and intermediate education agencies, local districts, and other information "retailers," providing direct services had always been a low priority for most clearinghouses. To the Management Review Group, a turn toward the practitioner implied an increase in direct service provision. (As we shall see, the Rand Corporation study which Burchinal commissioned reached a similar conclusion.) Nevertheless, Central ERIC reaffirmed its "wholesaling" policy.

- Advertise ERIC's Services

The Review Group questioned whether many practitioners and other potential users were aware of ERIC's services and urged Central ERIC to market its services more vigorously. According to Trester, the notions of advertising and marketing were foreign to federal bureaucracies at the time. Gradually, he says, the need for more active advertising has been recognized and acted upon.

- Current Subjects Clearinghouse

Noting that problems and topics of concern in education continuously arise and slip from view, the Review Group recommended that Central ERIC establish a "current subjects" clearinghouse. But Burchinal and then-director of ERIC Harvey Marron were looking to cut and consolidate, not to mount new operations, and the proposal was rejected. Instead, Central ERIC reaffirmed the policy of handling "hot topics" within existing clearinghouses.

The third action Burchinal took to reorient ERIC while contending with budget constraints was to ask Peter Greenwood and Dan Weiler of the Rand Corporation to formulate a range of alternative models for the ERIC Clearinghouse network. According to Trester, Burchinal hoped tacitly that the Rand Study would provide him with a disinterested, data-based solution to his budget cutting problem, thus disarming aroused clearinghouse directors.

Explicitly, Greenwood and Weiler were told that the study was prompted by NCEC concern about (1) "the system's ability to respond effectively to new issues that cut across or fall outside of the domains of existing clearinghouses", and (2) what modifications in ERIC were implied by the proposed National Institute of Education and USOE's "teacher renewal strategy."²²

In light of this concatenation of tacit and explicit purposes, the actual effects of the study appear ironic indeed. The study's report, submitted in December of 1971, precipitated a storm of controversy among clearinghouse directors and within Central ERIC. It also framed the issues and set a largely negative tone for deliberations on ERIC's future within the soon-to-be established National Institute of Education.

Greenwood and Weiler began their study with an analysis of the scope and sources of education literature and of ERIC operations in the context of a broad range of other information resources. Over a five-month period, they interviewed researchers, educators, USOE and HEW officials, managers of information centers, ERIC clearinghouse staff members, and people from professional associations. The findings of this phase may be summarized as follows:

1. The education research literature is vast, frequently contradictory, often irrelevant to real problems of practice, more theoretical and judgmental than rigorously empirical, and seldom synthesized into forms useful to educational planners and practitioners.
2. Practitioners rely far more on personal communication with colleagues, anecdotes, and informal advice than on formal information resources. The latter, including ERIC, are seldom used regardless of their strengths or weaknesses.
3. Information sources are superabundant, overlapping, and chaotic.
4. Few educators and researchers know about ERIC. Of those who do know about it, many choose not to use it. In-person help from information specialists does, however, seem to increase users' satisfaction.
5. ERIC coverage is broad but rarely deep. New topics fall through the cracks. Information analysis products are not visible enough. Too frequently, they are simply included in the data base as any other report would be.
6. The large number of separate clearinghouses creates problems of coverage, coordination, and management.

Having reached these conclusions, Greenwood and Weiler turned to the policy questions confronting ERIC, which I would summarize as follows:

- Whom should ERIC serve?
- What services should it provide?
- How should it be organized and managed?

To address the first two questions, the authors collapsed a long list of potential users into two categories -- researchers and practitioners -- then played these off against a list of possible system functions to generate ten potential system objectives for ERIC. These are given below in order of increasing complexity:

- I. Provide access to fugitive research and occasional literature.
- II. Provide access to fugitive research and occasional literature, practice and commercial literature, and curriculum materials.
- III. Review and evaluate research and practice literature.
- IV. Review and evaluate research and practice literature, commercial literature, and curriculum materials.
- V. Synthesize and summarize research and practice literature.
- VI. Provide query response for researchers and practitioners.
- VII. Provide personalized services for research community.
- VIII. Provide personalized services for practitioners.
- IX. Translate research and practice results into practical guides for practitioners.
- X. Act as educational change agents.²³

Essentially, these objectives move from a focus on acquisition and basic processing (acquisition, document reproduction, indexing, abstracting) toward a focus on putting research into more practical forms and formats (evaluating, synthesizing, specifying practice implications); and from providing passive access to the education literature toward providing active, in-person support for change in practice.

The authors then proceeded to develop a series of models which would move the system in these directions while also dealing with the management, coordination, and coverage problems their interviews had revealed. Beginning with a model calling for modest procedural changes, they laid out six models that entailed progressively more fundamental transformation, culminating in a regional model which combined "a functional set of [clearinghouses] to acquire, review and synthesize the research and practice literature, plus a regional network of [clearinghouses] to service the information needs of practitioners and researchers, primarily through an associated chain of information centers or teacher resource centers." Because the regional model would prove costly and disruptive if adopted forthwith, Greenwood and Weiler recommended a more modest change, but on substantive grounds alone, they clearly preferred it over other models.

Greenwood and Weiler concluded:

Simply increasing the supply of primary literature will have little benefit unless more careful attention is paid to its evaluation and synthesis; therefore, evaluating and synthesizing the data base should be a minimum system objective The most glaring deficiency in current education literature is the lack of documents translating preferred programs and research findings into operational advice to practitioners

Moving into the query response or service roles entails considerable expansion of the management responsibilities and skills required in the network, and considerably more funds; yet we believe that someone will have to fulfill these objectives if the extension agents and teaching centers are to succeed.²⁴

To summarize, Greenwood and Weiler counseled synthesis and service as priorities for ERIC. They also recommended consolidation of literature acquisition and processing functions into fewer clearinghouses, counterbalanced with the addition of new units to provide services on a regional basis. Although as we shall see, the changes recommended by Greenwood and Weiler were never made in the ERIC system itself, the general line of development which they advocated did characterize the evolution of dissemination programs and the next ten years.

In response to the Greenwood and Weiler recommendations, clearinghouse directors swiftly mobilized to develop their own recommendations for reorienting ERIC and making the necessary budget reductions. While the directors' plan did include some elements inspired by the Rand report, overall it was acerbic, criticizing the report as "ill-timed," lacking in perspective, and lacking "support from significant and representative power bases."²⁵

June 29th was a bad day for the directors. In the morning, Burchinal rejected the plan presented by their representatives, declared himself for consolidation to reduce the number of clearinghouses, stressed the need to improve information analysis and to integrate this work with the work of the new Practice Improvement Division, and indicated that the needed increase in service to users should be provided through NCEC's emerging relationship with state education agencies. In the afternoon, the directors' representatives met with Harry Silberman and Emerson Elliott of the NIE Planning Unit. The representatives were "appalled" to learn that the NIE planners were relying almost exclusively on the Greenwood and Weiler report for information about ERIC. They presented Silberman and Elliott with a copy of their own report on the system but left in gloom. Soon after the transfer of NCEC to the new National Institute of Education, Burchinal and his colleagues in Central ERIC would have reason to share this gloom.

The Fry Report: High Marks for ERIC

Only two months after the unsettling report by Greenwood and Weiler was published, a far more supportive assessment of ERIC was issued by Bernard M. Fry of the Indiana University Graduate Library School. The lead statement in Fry's summary of his findings was as follows:

The principal indicators of increased use and user satisfaction with ERIC products and services were all positive. Whether measured quantitatively by the remarkable growth and increased use of ERIC publications, or qualitatively by the stress of synthesis and evaluation and by the emphasis on the dissemination of information as well as document delivery, ERIC has come a long way toward achieving its overall goal of providing local access to needed information that can be used in developing more effective educational programs.²⁶

NCEC had commissioned the Fry Study in 1970. Its purposes were to examine the use of ERIC products and services and to determine how well the system was meeting its objective of providing ready access to the education research literature. Fry and his study team relied largely upon questionnaires administered to individual users by educational institutions cooperating in the study and upon organizational questionnaires completed by representatives of Regional Offices of Education, regional educational laboratories, educational information centers, clearinghouses, and private organizations with standing order collections. Questionnaire data were supplemented by twenty-one site visits. Most of the reported findings, however, are based on the quantitative questionnaire data.

After conceding that his data did not permit precise estimates of total uses of all ERIC products and services, Fry offered some admittedly rough estimates based on responses to the organizational questionnaires:

Table 127

Estimated Number of Users per Week by Product

<u>Product</u>	<u>Estimated Number of Users Per Week</u>
RIE	190,590
CIJE	138,330
Microfiche	178,190
Hard Copy	135,260

Estimated Number of Users Served per Week by Occupation

	<u>Estimated # of Users per Week</u>	<u>Percent</u>
Teacher	41,175	21.2
Administrator	21,142	10.9
Graduate Student	43,120	22.3
Undergraduate Student	77,585	39.8
Researcher	5,952	3.1
Librarian	5,255	2.7
	<u>194,229</u>	<u>100.0</u>

Fry reported that because the data were based upon a sample taken for evaluation purposes rather than upon a census, these figures probably understated the frequency of use. The logic of this claim is unclear. Setting aside the question of the accuracy of the estimates, it is difficult to judge the meaning of these figures. Do they represent high, moderate, or low levels of use? In the absence of a basis for comparison, it is impossible to say. On first examination, however, they certainly do not appear to reflect trivial levels of system usage.

Skeptics of ERIC's value emphasize that well over half the reported users were undergraduate or graduate students, while only about thirty percent of users were practitioners (teachers plus administrators), and only about three percent were researchers. The point seems to be that use by students is less likely to affect educational practice than is use by current practitioners. Presumably, however, these are students in education courses, most of whom will go on to teach. Fry himself pointed out that a significant number of the users classified as graduate students were active practitioners taking graduate courses.

Turning to the question of user satisfaction, Fry reported that users judged the system as a whole very favorably.²⁸ Two-thirds considered ERIC "very useful." Nine-tenths said they obtained information from ERIC which they would not have obtained

otherwise. Seven-tenths said the information "resulted in improvements in the way they do things." Users are reported to have been positive about the utility of microfiche, the ERIC thesaurus of terms, and both CIJE and RIE.

The Fry Study appears to have become lost in the brouhaha over the controversial Greenwood and Weiler report. Even if it had not, however, the Fry report is unlikely to have impressed the system's critics. For one thing, the study was rather slight methodologically, relying as it did not only upon self-reports by individual users through questionnaires administered by cooperating educational institutions, but also upon estimates of use made by a variety of agencies which had "bought in" to the system. For another, the figures on users by category -- revealing a predominance of use by undergraduate and graduate students rather than by practitioners or even by researchers -- would probably have worked against the system. That is, the figures tended to reinforce the perception that ERIC was not so useful for practice improvement as for research, and that the "research" it facilitated was not of a kind likely to push toward the frontiers of knowledge about education.

Even discounting these factors, however, the simple fact that the study was carried out by a library scientist would have tended to discredit it in the eyes of NCEC's critics. As we shall see in the next section, after the establishment of NIE, the debate was carried out at the level of broad conceptions or "paradigms" for school improvement. The whole information science paradigm was called into question, not simply the frequency of use of a system embodying that paradigm. The question became not how many teachers used ERIC and how satisfied were they with the system, but did the system really affect educational practice -- not did teachers use ERIC, but even if they did, did they use the results?

Fry acknowledged the distinction between using ERIC and using the research obtained through the system. He asked, for example, whether the information "resulted in improvements in the way you do things," and the response was positive. But direct observation of research utilization was well beyond the scope of the study, and this left those who would argue that ERIC had exerted a major influence on practice hanging by a pretty thin thread.

1972-1973: ERIC Meets NIE

Although a variety of political motives contributed to the Nixon administration's decision to create a National Institute of Education in 1972, one motive was dissatisfaction with the research supported by the U.S. Office of Education and a wish to improve it.²⁹ The premise was that better ideas, thoroughly researched, would be more effective than more categorical dollars in solving educational problems.

Despite the administration's rhetoric about improving education through R&D, the bill Nixon sent to the Congress included no provision for ensuring the use of new knowledge through a program

of dissemination. If the administration was silent regarding dissemination, the Congress was not. In its report, the House expressed its intent that the agency take "principal responsibility for the dissemination of research" at the federal level.³⁰ The Senate report went even further, urging the Institute to take on "the whole complex set of dissemination/ utilization functions that are desirable in this area."³¹

This broad mandate for dissemination, inserted late in the authorization process by the agency's chief Congressional sponsors, led in August 1972 to the transfer to NIE of the \$15 million dissemination program previously sponsored by the National Center for Educational Communication.

In January of 1973, NIE Director Thomas Glennan called for a review of NCEC's entire program. The resulting day-long meeting was disheartening for Burchinal and several of his colleagues. From the beginning, they felt the attitude of Glennan and his advisors was negative, sometimes to the point of contempt. As previously noted, Burchinal recalls one advisor challenging him to name five schools where a research report had made a difference in students' achievement. Burchinal summed up the reviewers' attitude in one question: "How does a document retrieval program hope to change the way kids learn?"³²

Several distinct factors appear to account for the Institute leadership's skepticism about the NCEC presentation:

- Some of Glennan's formal and informal advisors regarded most previous educational research as second rate. A tacit intellectual status ladder placed physical scientists at the top; social scientists "from the disciplines," especially those with a quantitative orientation, next; a few scholars from "the better schools of education" after that; and the common run of so-called educational researchers and educationists at the bottom. In the past, the lower-status groups had produced the bulk of the "research" in education, and it was pretty worthless. What point was there in storing it up and making it accessible?
- Others resonated to Greenwood and Weiler's observation that practitioners commonly relied upon anecdotal information and practical advice transmitted through informal person-to-person communication with peers. They argued that formal information systems were out of phase with teachers' and administrators' natural communication patterns. Accordingly, a system like ERIC would never contribute much to real change in educational practice.
- Glennan himself was less skeptical about ERIC than about the Pilot State Dissemination Program and Burchinal's proposal to build a full-scale, operational extension agent program upon the lessons learned in the Pilot State Program.³³ Glennan says that, contrary to rumors abroad in NCEC after the meeting, he was not hostile to ERIC as a system for

providing access to research literature, but did have doubts about it as the basis for a major initiative to improve educational practice. The letters, calls, and other expressions of political support for ERIC and the extension agent program, apparently orchestrated from within NCEC, also offended Glennan.

In any event, the meeting apparently ended with Glennan's request that the NCEC staff rethink or provide additional justification for several aspects of their program. According to Glennan, the requested memoranda were never provided.

The meeting and other events that convinced Burchinal "there would be no serious role for dissemination at NIE, no consistent support, no recognized importance."

Asked why, in his view, the memoranda and papers which Glennan requested were never produced, Burchinal first replied that those who remained were as convinced as he was that the exercise would be futile. Then, with some reluctance, he went on to speak poignantly of the effects of the transfer of NCEC upon some of his colleagues. Within the Office of Education, he said, NCEC staff saw themselves as specialists with valuable technical skills in information science, computers, and dissemination. A sense of esprit de corps, expansive expectations for the future, and a high level of activity characterized the unit. In NIE, physical scientists outranked quantitative social scientists from "the disciplines," who in turn outranked people from "the better schools of education," who outranked the normal run of researchers and educators, and disseminators found themselves at the bottom of the ladder. The shock of status loss, Burchinal observed, was profoundly dispiriting -- even immobilizing -- to many. For some, the effect was enduring; for others, temporary. But it did last long enough, he insists, to prevent a vigorous response to the challenge put to NCEC by the Institute's leadership.

From the "more objective" vantage point of the present, Burchinal says, he can concede that the critics of ERIC and the Pilot State Program may have had "some justifiable argument." "Knowing what we know now about the behavior of organizations and the difficulties of bringing about change in education, what dent can we expect an information retrieval system to make?" he asks. Elaborating on the ways his views have changed as a result of the ERIC experience, he labels as "somewhat naive" the assumption that a major proportion of educational practitioners would use the system directly. He recalls that ERIC developed in the shadow of large federal information retrieval systems designed to serve scientists, engineers, and medical practitioners, whose training and information-using habits were probably different from those of educational practitioners, a difference which went unrecognized during the early days of ERIC.

If he were managing the system today, he says, he would recognize that educational practitioners are not and need not be the primary

direct users of the system. Rather, he would orient the system to planners, policy analysts, specialists in state education agencies and local district central offices, applied researchers, and others with the needs, habits, and time to use the system. Further, he would allocate far more resources to information analysis -- the development of summaries, syntheses, interpretations, and research guides for practitioners.

Despite these regrets, Burchinal's pride in the system he and his colleagues built, and his belief in ERIC as an element of a more complex system of dissemination and school improvement, remain undiminished. ERIC may not be "gee whiz, whiz-bang, and showy," he says, but it represents a crucial, dependable, well-institutionalized basis for a great deal of other activity. In an information retrieval system designed to provide broad access to the huge literature of educational R&D, he argues, dependability and continuity are more important characteristics than excitement and flair.

ERIC in NIE: Technical Improvements and the Education Practices File

The history of ERIC within NIE is largely one of modest technical improvements and fine-tuning. According to program officials,³⁴ tight budget constraints have ruled out major changes. A major new study of ERIC usage has recently been completed by King Associates, but unfortunately NIE had not released the report at the time this volume was being prepared.

There is, however, one project which deserves treatment here -- the National Education Practices File Development Project. Speaking strictly, the Education Practices File Project was not a part of ERIC. But it did build upon the foundation which ERIC had laid, and if the Practices File pilot project had led to an operational program, the program would have become, in effect, an extension of ERIC.

The Practices File project was intended to learn whether and how an ERIC-like program might provide practitioners with information about educational programs and practices, as contrasted with research results. The distinction between practices and similar items which might be useful to practitioners, such as commercially published curriculum materials, was not entirely clear. But the general notion was that the new file would include information on exemplary practices, model programs, and promising ways of doing things in classrooms and schools.

In October of 1977, Bibliographic Retrieval Services, Inc. (BRS) received a contract to develop specifications for such a file. After collecting and analyzing suggestions from "the field" concerning features of the design, reviewing information on similar files and services, and consulting an advisory committee of practitioners and experts in dissemination, BRS outlined a set of design options for the file. Subsequent "feasibility analysis" reduced the options to a single design for testing. This design was submitted to NIE in June of 1978. 77

In July, BRS received a contract to develop and test a file based on the design specifications. According to BRS, "The test file contained approximately two-thousand records of programs and practices from the National Diffusion Network, state ESEA Title IV-C programs, the San Mateo Educational Resources Center, and numerous other sources."³⁵ The file was pilot tested for six months (May-November, 1979) in fourteen organizations and agencies, all but two of which already operated information-based dissemination programs. The pilot sites included three state education agencies, two regional educational laboratories, two widely known intermediate service agencies, two teacher centers, an ERIC clearinghouse, the NIE Educational Resources Library, a university library network, and two large urban school districts.

In May of 1980, BRS issued its Pilot Test Operation and Evaluation report, one of half a dozen products resulting from the Practices File Development Project. According to the report, the evaluation of the pilot test focused primarily on two issues: (1) the technical feasibility of using the file in information centers across the country, and (2) the utility of the file to centers in serving the information needs of their clients. Although practitioners and other users of the file were asked to complete forms on the utility of the searches they received, a full exploration of actual utilization could not be conducted within the budget allocated for the study.

To address the technical feasibility and utility to centers issues, BRS collected information from the pilot sites concerning usage of the file, perceived benefits, sites' assessment of various file features, problems and constraints, and suggestions for future use. A brief summary of the findings on each topic follows:

Usage

Variation in the overall level of usage across sites was huge -- from a low of a single use to a high of 137 searches. Low levels of use generally reflected idiosyncratic difficulties within sites, such as particularly inopportune turnover in personnel, rather than difficulties with the file. Another factor which depressed usage levels across the board was the timing of the pilot, which included three summer months.

Benefits

Sites perceived the file to increase their service capabilities in several respects, especially in the area of linkage to educational practitioners. They also cited benefits to their clients: "Teachers are always wanting to know what they can do to improve classroom practice. The Practices File makes it possible for them to act on this . . ." by telling teachers who to get in touch with about demonstrably workable programs.³⁶

Features

On the "validation" issue -- the question of screening through social scientific or other evaluation of programs' effectiveness -- sites were inclined to be inclusive. That is, they not only favored inclusion of all validated programs regardless of the source of the validation, but also favored inclusion of interesting but unvalidated locally developed programs. Most sites agreed, however, that the file should include information on programs' evidence of effectiveness or lack of such evidence, and that the file should be "partitioned" to permit separate searches of validated programs only.

Sites were evenly divided on the question of whether to include commercial materials. Some argued that such materials could not easily be distinguished from "programs" and that practitioners find them useful; others countered that this might turn the file into a "propaganda" vehicle for commercial interests.

Problems and Constraints

Two main problems associated with using the file were reported. First, the "limited scope and content of the pilot test file," which frequently resulted in very few "hits" on a search and thus frustrated information centers' clients. And second, problems with follow-up. Not only were more detailed descriptions and materials on particular programs not available from a single source -- as they are in ERIC -- but there were also some difficulties in making contact with people in the programs identified through the file.

Very few sites had received any feedback from clients regarding whether or not they had been able to follow up on the practices identified through their file searches. One site, a teacher center which routinely provides follow-up services to clients, reported, however, that their follow-up of sources identified through about 90 file searches conducted had yielded a 70% rate of response. In almost all these cases, the response was described by site personnel as adequately meeting the client's needs. It is certainly too early to tell whether similar results will be forthcoming from other follow-up efforts, and until this is known, caution should be taken in interpreting the experiences of this one site.

Potentially significant problems which were identified in the area of follow-up activities focused on the fact that some programs, including state-validated Title IV-C Demonstration Projects, are unable to disseminate outside their particular states according to the terms of their dissemination grants (this is indicated on all IV-C File entries); and that in other cases, projects simply do not have available resources to respond to widely dispersed queries. Several site

personnel recommended that these issues be directly addressed in the abstract on such programs, so that clients are made aware of possible problems with obtaining further information or direct contact assistance.³⁷

The BRS report takes pains to distinguish problems in the file from problems in site operations or problems attributable to pilot test procedures. While "follow-up" problems may not be problems in the file itself, they certainly are entailed in using the file for its principal intended purpose: educational improvement by practitioners. Charles Hoover, formerly head of ERIC and now in charge of the Information Resources unit responsible for ERIC, expressed reservations about the practices file idea on this basis alone. "In the National Diffusion Network, if a practitioner identifies a program he wants to adopt, he can be sure the program still exists and that somebody in the program can give him good information about adopting it. With the practice file, you can't be sure the back-up will be there. Sometimes people get excited about a program, only to find out it no longer exists. And that can turn people off on the whole system."³⁸

Charles Mojkowski, a member of the BRS study team, agrees that a substantial proportion of the information centers' clients reported difficulty in getting a response from programs identified through the system. But while Hoover interpreted the figures to reflect negatively on the file, Mojkowski simply found them impossible to interpret. That is, budget constraints prevented a more detailed investigation of such questions as, "Was there no response at all, or no response which the clients found useful? What kinds of programs were failing to respond? Why were they failing to respond?" In the absence of answers to these questions, Mojkowski says, it was impossible to know the meaning and implications of the figures.³⁹ The BRS report recommended further study of the question.

It does seem clear, however, that any system which is "referral based" rather than "document based" -- which refers users to program developers for information, rather than to a centralized depository of program documents and materials -- will face some difficulties in this area. Not that the difficulties are insurmountable. For example, Mojkowski reports that in the School Practices Information File which BRS now operates, the problem of non-response has been substantially reduced by the introduction of a system to "purge" the files of programs that have been terminated. The problem of state-validated and supported programs' being prohibited from interstate dissemination, and the simple fact of inadequate resources, will continue to present obstacles to full effectiveness in a referral-based file. Some combination of special federal funding for interstate dissemination of state-validated practices and reciprocal agreements among the states themselves would alleviate the problem. As subsequent

chapters of this report will demonstrate, the advantages of in-person communication to support dissemination and implementation of new practices are clearly sufficient to warrant persistent efforts to solve the problems associated with a referral-based system.

Suggestions

The major suggestion for improvement of the file was to expand the content to all subject areas and levels, including both validated and unvalidated programs. In addition, a number of technical improvements were suggested. Though clearly important to smooth and effective functioning of the file, for present purposes it is not essential to reproduce them here.

In addition to data from the information centers that pilot tested the file, BRS collected some data from "end-users," or clients of the centers. These data were of two types: information on user characteristics, and appraisals of the specific searches performed. In contrast with Fry's finding that the most common users of the ERIC system were graduate and undergraduate students, BRS found that over sixty percent of all practices file users were elementary and secondary school teachers, administrators, or other school personnel. It should be noted that a major criterion for site selection was that the information center should be capable of "service delivery to a breadth of target groups representing educational practitioners." And indeed, school districts and school personnel composed more than half the clients for the sites' services before the practices file pilot began. Nevertheless, the set of sites did include some centers whose primary clients were university students, and these might have predominated in actual utilization of the system. That they did not, especially in light of the persistent complaint that ERIC serves university students more than it serves practicing educators, appears significant.

Consistent with the data on users' roles is the finding that the three most common purposes for seeking information from the file were program development, curriculum development, and classroom instruction. Next in order of frequency were administrative planning and research/evaluation.

Users were also asked to complete forms rating the information they received from a search of the file on six specific topics: "how well it met the information request, whether it was new to the user, if adequate information was provided for the user to follow up on the practice, if material provided adequate evaluative details to be of value to the user, clarity in terms of sharing with a colleague, and adaptability to the individual's use."⁴⁰ The table on the following page displays users' responses. As the table indicates, response was positive on all counts.

On the basis of the pilot test and evaluation, BRS concluded that the Practices File was clearly useful to information centers in serving their clients' needs and that using the file in information centers all across the country would be technically feasible. BRS recommended an extended additional test of an expanded and otherwise refined version of the file. After some delay, NIE issued an RFP for additional work in this area.

Some Observations on the Origins and Evolution of the System

This chapter has argued that ERIC originated as a response to the USOE Media Research Branch's difficulties in keeping track of the torrent of reports flowing out of projects funded with NDEA dollars. To evaluate proposals for new research, proposal reviewers needed to know what research had already been done, with what results. Researchers submitting proposals had a similar need. The earliest conceptions of the system were also influenced by the sample of prestigious, well-developed research information systems supported by federal agencies in the hard sciences, medicine, and engineering fields.

Once conceived, the idea broadened, in keeping with the widely observed bureaucratic tendency for solutions to chase new problems. And in fact, other parts of USOE's research apparatus did share the Media Research Branch's problem of getting control over a rapidly expanding literature. Applying the ERIC solution to their problems was probably quite appropriate. During this period, the possibility that Congress would call on USOE to demonstrate its stewardship in research created enough unease to motivate continued development of the system.

In 1965, the Congress stepped forward in an unanticipated way: it passed the Elementary and Secondary Education Act, vastly inflating the demand and expectation for research to help solve the country's educational problems. The ERIC solution was put forward in response to this new problem. It would enable practicing educators all over the country to find research related to their needs. Educators would use the system, and they would use the research they got from the system.

By the late 1960's -- very quickly, it seems in retrospect -- the officials responsible for ERIC recognized that things were not working out that way. Practitioners weren't using the system in large numbers, and no one was certain that those who did use the system were using the results to improve practice. It was clear, however, that Congressional expectations for a transformation of American education, informed by research, were not being realized. USOE dissemination officials, influenced by academics interested in research utilization processes, concluded that a program of personal assistance in using the system and its issue was required.

Table 2

Respondents' Evaluation of Specific Aspects of the Practices File⁴¹

Ratings		a. Met Request	b. Newness	c. Adequacy for Follow-up	d. Adequacy of Evaluation	e. Clarity	f. Adaptability
Positive	1	65 (28.6%)	100 (44.6%)	80 (37.6%)	41 (19.6%)	87 (39.0%)	61 (27.5%)
	2	72 (31.7%)	78 (34.8%)	80 (37.6%)	82 (39.2%)	89 (39.9%)	73 (32.9%)
	3	38 (16.7%)	33 (14.7%)	37 (17.4%)	54 (25.8%)	36 (16.1%)	39 (17.6%)
	4	26 (11.5%)	9 (4.0%)	8 (3.8%)	20 (9.6%)	4 (1.8%)	25 (11.3%)
Negative	5	26 (11.5%)	4 (1.8%)	8 (3.8%)	12 (5.7%)	7 (3.1%)	24 (10.8%)
TOTAL		227 (100.0%)	224 (100.0%)	213 (100.0%)	209 (100.0%)	223 (100.0%)	222 (100.0%)
Median Response		2.20	1.65	1.82	2.30	1.80	2.23

At the same time, they concluded that ERIC needed a political constituency. Without an independent authorization and separate line item in appropriations bills, ERIC had to fight annually for a share of the agency's discretionary funds. By making state education agencies the vehicle for the program of in-person assistance to ERIC users, USOE dissemination officials hoped to persuade Chief State School Officers to support an expanding budget for ERIC and for the "extension agent" program.

Before the new program could mature, the National Institute of Education was created, partly on the premise that previous educational R&D hadn't been very good. If this were true, some people around the new agency's leaders argued, there was little point in spending much money disseminating existing research results. This skepticism about the value of the contents of the system was augmented by skepticism about the value of information-based systems as vehicles for educational improvement. The extension agent program was terminated, and ERIC was put on subsistence rations. Since very early in NIE's existence, ERIC has seen no major change in policy or substance though there have been a number of significant technical improvements.

Problem, Strategy, and Assumptions in the ERIC System

While telling the story of the ERIC system, this chapter has explained how the program defined the dissemination problem, described the program's strategy for solving the problem, touched upon the assumptions underlying the strategy, and showed how the program actually played out in practice. Because the discussion to this point has been largely historical and discursive, however, the problem definition, strategy, assumptions, and experience of the program have not been delineated concisely in a single location. This section does so, deliberately oversimplifying matters in order to render the core program elements in hard-edged outline.*

Definition of the Problem

The profusion of literature published through diverse sources or unpublished, creating difficulties for people who want to use research to solve particular problems or clarify issues related to education and/or school improvement.

*Two reminders: First, the term "assumption" is used here to refer to a proposition that would have to be true if the program were to work. It does not necessarily imply that the program's framers recognized that it was predicated on such an assumption, though they may have done so. Second, assumptions concerning the necessary and sufficient conditions for educational improvement in classrooms, schools, and districts, are distinguished from assumptions that concern the system for supplying necessary but missing conditions to the local level.

Strategy

Create a network of clearinghouses and support contractors to acquire, index, abstract, and reproduce research and to "wholesale" information through libraries and other intermediaries.

Assumptions Regarding Conditions for School Improvement

- that the principal missing condition for effecting improvement is ready access to research results
- that practitioners lack the time to conduct extensive conventional searches themselves, but do not lack either the skills or inclination to draw upon research and put it into practice
- that practitioners can and will use primary products of research and development -- synthesis and other "information analysis products" would be convenient but are not crucial enough to displace acquisition and basic processing as priorities
- that the organizational setting within which research is utilized is either irrelevant or beyond the power and/or proper role of the federal government to influence

Comment

Studies of the ERIC system, as well as experienced observers on the dissemination scene, generally agree that simple access, while necessary, is far from sufficient to promote widespread improvement in actual practice. Most practitioners seem to lack not only the time but also the inclination and perhaps the skills to search out and use research related to their problems. The response to products such as the RDx-supported Research Within Reach series suggests that "information analysis products," or syntheses of research closely related to problems commonly experienced by practitioners, are probably more helpful than research articles and reports in their original form. Similar information analyses have certainly been carried out by the ERIC system; unfortunately, in the eyes of many of the practitioner community, aspirations have outrun achievement by a wide margin in this area.

Having said this, I should emphasize, however, studies show that ERIC performs its basic archival and access functions well and reliably. If ERIC's services are not sufficient to get research into practice, even most of the system's critics agree that the ERIC data base is a necessary resource. It is often said that if ERIC did not exist, we should have to invent it.

The influence of schools as organizations upon the process of research utilization must have been far from the minds of ERIC's creators. They had a concrete problem: how to keep track of the research literature burgeoning with federal support. A bit later, the people who created ERIC did recognize that organizational factors at the school and district level are critical determinants of the extent to which research will be used to upgrade practice. But they rejected the notion that the federal government should intervene in the governance, organization, and management of local schools to assist in making improvements using available knowledge resources.

Assumptions Regarding the System for Supplying Missing Conditions

- that acquisition and basic processing are best carried out by universities, professional associations and other organizations which already had substantial collections and personnel expertise at the time of ERIC's creation -- not by the government itself
- that the same centers that carry out acquisition and basic processing can and will synthesize and interpret it for various audiences (practitioners, policymakers, researchers)
- that university libraries, local education agencies, intermediate service agencies, state education agencies, and other intermediaries will "retail" the information which ERIC wholesales, reducing or eliminating the need for the ERIC network to provide direct services
- that the same system can serve basic and applied researchers, policymakers, and practitioners

Comment

The decentralization of ERIC to a variety of universities and professional associations created some administrative problems for ERIC, but these problems of coordination and standardization appear to have been handled reasonably well. Some of the reforms suggested by Greenwood and Weiler in 1972 -- such as consolidating some clearinghouses and creating divisional structures to promote uniform practices and eliminate gaps and overlaps -- might still help to fine-tune the system. But acquisition and basic processing are already reliably performed. The strategy of "wholesaling" information to state, intermediate, and local education agencies and other intermediaries also appears to have worked out rather well.

The assumption that the ERIC system can serve practitioners as well as basic researchers, applied researchers, and policymakers has not stood up as well. ERIC founder Lee Burchinal noted recently⁴² that it is probably more sensible to think in terms of a "two-step communication process." ERIC takes the first step, but a second interpretive or synthetic step is required to reach

practitioners and policymakers. And only in some instances will the relevant ERIC Clearinghouse be the best organization to carry out this interpretive second step. A variety of other agencies have taken on this function.

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CHAPTER THREE: STATE DISSEMINATION CAPACITY BUILDING PROGRAM

As Chapter Two suggested, by the late 1960's chief ERIC architect Lee G. Burchinal had grown weary of the "grinding annual battle" for a budget to support the system. In 1969, ERIC actually suffered a budget cut. Burchinal concluded that to prosper -- perhaps even to survive -- ERIC would have to build a political constituency. The program could not continue to rely on persuasion, a climate favorable to research, and good fortune.

At about the same time, he inherited another problem. Responding to ubiquitous and persistent criticism of USOE's stewardship of education research, in August of 1969 Commissioner James Allen announced a reorganization which folded much of the Bureau of Research into a new National Center for Educational Research and Development. Allen said resulting improvements in coordination would "encourage more effective linkages . . . among the processes of research, development, evaluation, demonstration, and dissemination as a means of accelerating the widespread application of improved methods and practices".¹ USOE had been criticized not only for supporting mediocre research but also for failing to get such results as had been produced into practice.

Shortly after the reorganization was announced, Burchinal was named Acting Assistant Commissioner in charge of the new dissemination unit, soon to be called the National Center for Educational Communication. Burchinal told his colleagues that the new unit would focus on effecting change in educational practice. To this purpose, ERIC could contribute a knowledge base but was not itself sufficient.

Burchinal needed a way of responding to the Congressional and White House pressures for better management and a closer connection between research and practice, while also finding a constituency for his program. For ideas about ways to handle both of these pressures, Burchinal drew heavily upon notions advanced by his colleague Thomas Clemens. Concerning "linkages," Clemens put forward work of a scholar of research utilization -- Ronald G. Havelock. Havelock had conceived a theory of "linkage" which; he argued, would overcome the inadequacies of other major perspectives on research utilization by combining their strengths into a kind of master theory.

Concerning the need for political support, Burchinal reasoned that Chief State School Officers would be a powerful source of support, especially in light of their increasing prominence in administering federal programs, and President Nixon's move toward revenue sharing. But apparently it was Clemens who supplied the substantive vision of SEAs' school improvement potential that permitted NCEC to turn Burchinal's ideas into a program.

Because the Havelock study so deeply influenced the thinking of NCEC officials, and subsequently that of NIE dissemination officials if not the top leadership, the study is treated in considerable depth in the next section. Clemens himself was the most articulate spokesman for the state education agency's potential to effect school improvement. His vision of the SEA's role in school improvement is presented in the section following the one on the Havelock study.

The Havelock Study

In the spring of 1966, Ronald Lippitt of the University of Michigan's Center for Research on Utilization of Scientific Knowledge (CRUSK) had introduced his colleague Ronald G. Havelock to NCEC officials. Lippitt was aware of ERIC's development through associates who were preparing a proposal to operate the ERIC Clearinghouse on Counseling and Guidance (a contract which they won in June of that year). As Havelock recalls, "CRUSK had been started formally a year or two earlier, but we were still just getting it off the ground. Some of us weren't too experienced in the whole world of government funding, so Lippitt took a couple of us to Washington to show us the ropes. We went to several agencies . . . NASA, I think, and maybe the Department of Labor . . . then we stopped in to see Burchinal. Lippitt just figured that if these people had developed ERIC, they should be interested in my ideas."²

Havelock's "ideas" included a proposal to carry out a comprehensive review of the literature on "knowledge utilization." The review would cover theoretical as well as empirical work and would extend well beyond education to treat the diffusion and use of innovations of all sorts.

From Havelock's point of view, the review of the literature was important partly because the fledgling CRUSK needed a sound foundation in research and theory. "I felt that if you were really serious about mounting a program of research on knowledge utilization, you needed to start by synthesizing everything that had already been done on the subject," Havelock recalls.³

Lee Burchinal and Thomas Clemens, whom Havelock perceived to play "idea man" to Burchinal's role as adroit bureaucratic politician, were intrigued by Havelock's idea and encouraged him to turn it into a formal proposal. This he did during the summer of 1966.

In December, the proposal was funded and with several associates, including his wife Mary, Havelock began work. The ambition of the project was formidable. Over 4,000 individual articles, studies, or other pieces of literature were reviewed over its two and a half year life. The 507-page report, Planning for Innovation: A Comparative Study of the Literature on the Dissemination and Utilization of Scientific Knowledge, was published in July of 1969, about half a year before the Pilot State Dissemination Program was launched.

The report argues that the literature falls into three broad traditions, each representing a different "model" of dissemination and utilization. The three are (1) Research, Development, and Diffusion, (2) Social Interaction, and (3) Problem Solving. Late in the report, a synthesis of the major features, strengths, and weaknesses of each model is offered, and this is followed by a parallel presentation of Havelock's "linkage model," which is said to integrate the strengths and eliminate the weaknesses of the other models. An account of the four models follows.

1. Research, Development, and Diffusion Perspective

According to Havelock, the RD&D Perspective "posits a user population which can be reached effectively and influenced through . . . dissemination activities of various sorts, provided, however, that this dissemination is preceded by an extensive and complex process of research and development."⁴ Although there are many variants on the RD&D model, Havelock claims that five key features are shared by all variations:

- Rational sequence -- Dissemination and utilization should be a rational process which moves from research to development to packaging to dissemination.
- Planning -- The entire process must be planned meticulously over a long time line.
- Division of labor -- Functions (research, development, dissemination) must be separated out and allocated to distinct roles ". . . an obvious prerequisite in all complex activities of modern society, but one that we sometimes slur over."⁵
- Passive consumer -- The target audience for dissemination is clearly specified. These consumers "will accept the innovation if it is delivered on the right channel, in the right way, and at the right time." This result can be assured through scientific evaluation at every step in the sequence.
- High initial development costs -- A major up-front investment in research, development, and packaging will yield proportionate pay-offs in "efficiency, quality, and capacity to reach a mass audience."

The model is derived, Havelock suggests, from prototypes that are "presumed to exist in industry, defense, and space and perhaps most especially in agriculture." He goes on to observe that:

It seems to be a particularly popular and appropriate model for dealing with D&U issues at the macrosystemic and policy levels...because it subdivides the knowledge flow system into different functional roles which exist within different sub-cultures (e.g., the research

community, the product organizations, the practitioners, the consumers). It does appear to supply much of the rationale for current policy planning in the U.S. Office of Education.⁶

In light of subsequent critiques of the model, an additional observation which Havelock relegates to a footnote also bears reproducing here:

Advocates do not assume, however, that knowledge flows in a linear fashion from R to D to D. R and D is usually seen as a constant recycling process of design, evaluation, feedback, redesign and so forth . . . particularly when we are thinking of specific innovations and their development histories. From a broad historical and policy perspective, however, the "linear" flow would appear to have some validity.⁷

Although Havelock praises the model as a "very useful and relevant paradigm for technical and social change", he also allows that it "can be said to be over-rational, over-idealized, excessively research oriented, and inadequately user oriented."⁸

2. Social Interaction Perspective

What Havelock calls the social interaction (S-I) perspective is more commonly labeled "diffusion theory" because the phenomenon it treats most centrally is the spread or diffusion of innovations through social systems. S-I originated in a subdiscipline of cultural anthropology that seeks to understand how cultural traits are borrowed from neighboring cultures and subsequently spread through the borrowing culture.

In contrast with the research, development, and diffusion (RD&D) perspective, S-I ignores the development of innovations and concerns itself not at all with their technical merits. S-I research assumes the presence of innovations from some source and traces their "flow through a social system over time." Because stability in the element to be traced facilitates measurement of diffusion, S-I research tends to focus on concrete, well-defined innovations which change little as they spread.

As with the RD&D perspective, Havelock characterizes the S-I model in terms of several distinct features:

- Importance of the social relations network -- The complex, intricate web of interpersonal relationships in which individuals are embedded determines whether and how an innovation will diffuse. It cannot be assumed that "the best innovations will diffuse by themselves" or that "new ideas can be conveyed successfully through publications or other mass media alone."

- The user's position in the network -- Certain "key influentials" -- people of high status who set norms -- determine whether an innovation will diffuse through a community. The path and pace of diffusion is determined by the network of relationships and by the frequency of interactions along this network. Innovations pass from "innovators" who are marginal to the community because they have so many links to the outside; to opinion leaders; to the "early majority" who are close to the leadership; to "laggards", who are peripheral to the mainstreams of relationship. Whether and when a potential user will actually adopt an innovation may be predicted from his or her position in the network.
- Personal contact -- The first two features imply the third feature: diffusion depends critically upon face-to-face personal contacts. Even the opinion leader gets his or her ideas through interpersonal sources -- from local "innovators" who depend in turn upon their contacts with outside sources. "For the all-important stage of evaluation (deciding whether or not an innovation ought to be adopted) personal sources seem to be the most significant for all adopters For the vast majority it is the crucial element at all stages."⁹
- The individual's group identity and group loyalty -- The individual's "psychological group" or "reference group," as distinct from the social group of which he or she is only manifestly a part, influences his or her attitudes and behavior most strongly. People will adopt ideas, attitudes, and behaviors which they see other members of their reference group adopting.¹⁰
- Irrelevance of size of adopting unit -- Although S-I theory is widely perceived to apply only to individuals and not to organizations (e.g., schools, school systems), Havelock asserts that "This belief is categorically false." The basic findings of S-I theory are "remarkably consistent" regardless of the size of the adopting unit, he says, and goes on to add that,

If the configuration is closely similar irrespective of time, circumstances, and unit size, the significance of S-I research findings is enormous, because it means that generalizations from one set of findings in one setting can be applied, at least tentatively, to the analysis of other settings; diffusion research in agriculture and technology can then be used at the very least to make shrewd guesses in medicine, social welfare and education. It is a most significant step towards a general science and engineering science of D&U processes.¹¹

- Significance of stages of adoption -- It is fruitful to divide the adoption process into five phases: awareness, interest, evaluation, trial, and adoption. Different dissemination strategies are most effective at different stages (e.g., mass media, demonstration, contact with experts, informal work with peers). "Armed with this knowledge," Havelock says, "the change strategist can plan out a synchronized multi-media program of influence which has an optimum likelihood of achieving maximum D and U."¹²

In evaluating the S-I tradition, Havelock is clearly impressed by its strong empirical basis ("over 1,000 empirical studies") and its apparent promise for applied work. But he does point out several shortcomings, as well: (1) neglect of the processes through which innovations are generated (invention, research, development); (2) inattention to the transformations which innovations undergo as they diffuse; (3) inadequate attention to maladoption, inadequate or inappropriate adoption, and rejection; (4) sketchiness of the psychological processes through which individual adopters are presumed to go; and (5) neglect of the literature on organizations, and a corresponding tendency to emphasize adoptions by organizations as total units, ignoring the importance of the flow of adoption within organizations.

3. Problem-Solver Perspective

For the Problem-Solver (P-S) Model, the primary point of orientation is the "user" and his/her problems or needs. This contrasts with the emphasis of the RD&D model on the generation of new knowledge and the S-I model's focus on the diffusion of innovations once produced.

In fact, the P-S model puts "knowledge utilization" into perspective as only one part of a cyclical process of problem articulation and resolution. Although there is some variation in the ways in which different P-S theorists specify the cycle, Havelock says that a typical sequence would run like this: "(1) need sensing and articulation, (2) diagnosis of the need as a problem to be solved, (3) identification and search for resources relevant to the problem, (4) retrieval of potentially feasible solutions and solution-pertinent ideas, (5) translation of this retrieved knowledge into specific solutions or solution prototypes, (6) behavioral try-out or application of the solution to the need, with evaluation of effectiveness being made in terms of need reduction. Presumably, if the solution does not satisfy the need, the cycle begins again, and continues until, through a series of trials and adaptation efforts, the problem is solved on an adequate and lasting basis."¹³

As with the RD&D and the S-I models, Havelock reduces the P-S model to a set of key propositions:

- User is the starting place -- The user's needs, circumstances, and processes are primary. Only in relation to these does an innovation take on meaning or value.

- Diagnosis precedes solution identification -- P-S assumes that the user's manifest needs may be merely symptomatic of "real needs" and asserts that only careful diagnosis will reveal the real problem.
- Helping role is non-directive -- Outside consultants should not try to solve the user's problems for him/her (expert role), but should provide the user with "guidance and training in how to do his own problem-solving" (non-directive consultant). Assistance with the process of problem solving will leave behind an internal capacity to solve additional problems as they arise. At most, the outside consultant should become an equal member of a temporary team formed to solve the problem.
- Importance of internal resources -- "Home-grown" knowledge is generally more relevant and better suited to the needs of users than are imported innovations. Even where imported innovations are appropriate, "the user will have to mobilize internal resources of skill and experience to the task of adaptation of the outside knowledge to the inside need."¹⁴
- User-initiated change is strongest -- Changes that are undertaken because users themselves feel the need for the changes are most likely to be carried out effectively and to endure. Changes initiated by "outside experts" are prone to breakdown. Users must feel the changes are their own.

Havelock finds the P-S model very persuasive, but offers three criticisms. First, P-S "puts excessive strain on the user"; the typical user may not have the capacity or creativity to produce his/her own innovations. Second, P-S advocates do not appreciate the rich array of ideas and innovations that are available and the advocates offer no practical way of making these accessible to all schools. And third, "with a very limited supply of change agents and with each user system needing a change agent with whom to work through an extended P-S process, how will we ever reach 20,000 school districts with all the useful ideas that are now available?"¹⁵ Havelock also notes that there is far less empirical support for the P-S model than for the S-I model.

4. The Linkage Model

Having summarized the three main traditions of research and thought about the dissemination and utilization of knowledge, Havelock allows that each has contributed useful insights about the process but argues that none of the three by itself provides a comprehensive model. He sees a need to integrate the strongest features of each into a new model, and advances his notion of "linkage" as the basis for such a new model.

Here are the key propositions of the Linkage Model:

- Problem-solving user is linked to external resources -- It is important to begin with the user and his or her "felt needs," but at some point in the problem-solving cycle, the user should be "meaningfully related to outside resources."
- Relationship between user and resource system is reciprocal -- People in the resource system must understand the user's need and problem-solving process. This requires close interaction and genuine mutuality between user and resource system, not one-way transfer. To facilitate communication, the user should also learn about the social scientist's processes. "Only through understanding, appreciating, and to some degree, emulating such processes, will the user come to be a sophisticated consumer of R&D."
- Reciprocity builds enduring channels of influence -- It is important to think beyond the isolated interaction between user and resource, to develop a relationship of trust, a channel of enduring social influence. Over time and across transaction with many users, the resource person will build a stable, well-elaborated social influence network.
- Resource person links to more remote resources -- Linkage is not a simple two-person interaction. The resource person draws on a variety of specialists and other sources of expertise remote from the user. Through a series of such links, each paralleling the original link between user and resource person, a "chain of knowledge utilization" connects "the most remote sources of knowledge in the university with the most remote consumers of knowledge."
- Prime task of knowledge utilization is to integrate societal subsystems -- At the societal level, distinctive subsystems for knowledge building, knowledge disseminating, and knowledge consuming may be distinguished. Societally, the task of knowledge utilization is to bring these large subsystems into a relationship like those outlined for individual users and resource people: reciprocal, enduring, with two-way communication and mutual understanding.
- Role of government is to strengthen and integrate subsystems --

Government must have the capacity to monitor and model this macrosystem, facilitating linkage where barriers exist, adding components where there appear to be significant gaps, and discouraging the growth of divisive and maladaptive subsystems. The government should see to it that all the functions of research, development, and diffusion (RD&D) are adequately performed; it should help in the establishment and maintenance of networks of social influence (S-I) which

can move tested innovations towards mass consumption; and it should facilitate effective problem-solving (P-S) by users and user systems.¹⁶

In retrospect, Havelock seems remarkably optimistic about the competence and power of government to manage events. No perverse or just plain intractable realities intrude upon this well-ordered universe. Few political, organizational, or personal forces at cross purposes to rational improvement present themselves, and those which do cannot long resist the government's orchestrations. If we were speaking of psyches, this would be a pre-Freudian world. The naturalism, the empiricism of the Social Interaction perspective is admired, but S-I knowledge is quickly fashioned into a tool for rational dissemination and utilization policy. S-I networks become channels which government can "establish and maintain" to transmit expert knowledge to masses of users. Improved communication between "user" and "resource systems" is construed in exclusively rational cooperative terms, not as a political and personally troublesome process.

Although the process did not work out so neatly and harmoniously in practice as in Havelock's early conception, his argument for "linkage" through interpersonal assistance did represent an important contribution to thinking about dissemination and did shape the Pilot State Dissemination Program, which put people concerned about dissemination in closer touch with practitioners, from which -- as we shall see below -- a good deal was learned.

Clemens' Vision of the SEA as a Facilitator of Change

It would have been possible to provide local schools with interpersonal assistance in using R & D by offering grants to organizations that could prove they had the motive, the means, and the experience to give assistance energetically and competently. Some of the winners in such a competition would certainly have been SEAs, but many would not. This strategy for providing assistance to schools seems appealing as a way of achieving the substantive objective: to get research into practice.

But in the process it would have sacrificed Burchinal's political objective: winning support for the ERIC system and for the program of interpersonal assistance, itself. While the few Chief State School Officers whose agencies won grants might have supported such a competitive program, any program not restricted to SEAs alone was unlikely to win much support from the Council of Chief State School Officers, the Chiefs' presence in Washington. In fact, the SEA lobby probably would have opposed such a program on the grounds that the federal government was once more trying to bypass the states, in clear defiance of the states' constitutionally reserved authority over education. SEA opposition to the program would have overshadowed any support from universities, non-profits, or other organizations that won grants to give assistance. Partly for this reason, Burchinal's thinking turned toward state education agencies as the assistance providers.

But other reasons for turning toward state education agencies were also advanced. The most vigorous and influential proponent of these reasons was Burchinal's colleague Thomas Clemens.

The best existing expression of Clemens' vision of the SEA as a "facilitator of change" is found in a paper which he presented to an audience of state education personnel not long before the Pilot State Program was launched (Clemens died in 1976). In the paper, Clemens articulated a view of the change process which, though crude in some particulars, is certainly comprehensive and is strikingly sophisticated on several points. He recognized not only that information passively supplied is insufficient to bring about change in practice, but also that information supplied through active interpersonal communication is only part of the picture.

The line of argument is rather tangled and obscure in the paper itself, but untangled and clarified it runs approximately as follows:

A number of major obstacles to improvement are inherent in the education system. First among these is many school districts' lack of a capability "to respond to and act upon . . . new knowledge."

"These mechanisms," Clemens wrote, "are within the school district itself, and are relatively impervious to manipulation by outsiders."¹⁷ Among the within-district conditions that influence districts' ability to change are community support for high quality educational programs; "openness," or willingness to perceive problems and to make use of information from outside sources; the quality of teacher-administrator communication about their work; budgetary flexibility; the clarity and measurability of school district goals; and the amount and clarity of communication about goal attainment.

While Clemens' understanding of within-district institutional factors (at least as reflected here) may be crude compared to the more conceptually differentiated and empirically supported notions that developed over the intervening decade, he clearly was aware of the role of district level factors in the change process, but viewed them as beyond the power (or legitimate authority) of USOE to influence.

Clemens also perceived other institutional properties of the education system as constraints upon the change process:

- Pluralism -- "Put briefly the pluralistic system of education we have in this country appears to conform to American values, but it does make the problem of system-wide change slower and more difficult."
- Diffuse Goals -- The diffuseness of goals in education and the concomitant difficulty of measuring performance in

relation to goals make it difficult to determine the relative advantage of any given practice or product over any other. This retards innovation.

- Limited Scientific Tradition -- Educational practice is experience-based rather than science-based. Practitioners are not trained in scientific methods or oriented to scientific knowledge.
- No Single Locus For Decision Making -- "most changes of any significance involve a number of congruent decisions in different loci: policy decisions by the school board, management decisions by superintendents and principals, subject matter decisions by supervisors, and implementing decisions by each classroom teacher involved."¹⁸

Clemens clearly faced a dilemma. He had recognized the importance of local institutional factors in the change process, but had concluded that the federal government can not and should not do much to influence them. He had also recognized the constraints upon change offered by other institutional properties of the education system. Of course, he could have taken these insights philosophically, viewing the intransigence of social realities as conditions which establish firm limits upon the rate and degree of possible change in education. But Clemens was ambivalent about accepting such limits. While he was convinced that pushing back the limits was beyond the power and legitimate constitutional authority of the federal government, he had at least a partial answer to the problem: the state education agency. With respect to diffuse goals, for example, he wrote:

[There is a] . . . need for more precise, operational, and attainable educational goals, if the pace of educational improvement is to be accelerated. The State Education Agency is the most appropriate and likely source of leadership for overcoming this constraint; but let us recognize that explicit goal definition is in itself an educational innovation. As a result, we may anticipate somewhat slower spread of educational improvements than improvement in other areas of human endeavor.¹⁹

More broadly, Clemens believed that state education agencies commanded a number of important "resources for change." They have constitutional authority for education. Increasingly, they are playing a leadership role. ("This role is a natural one," Clemens wrote, "both because of the State role as the responsible governmental agent for educational policy and because it is in a more favorable position than individual school districts to draw upon external resources for educational improvement.") SEAs influence policy making by the state legislature and the governor. Most interestingly and importantly however, Clemens saw

the SEA's regulatory powers and role in educational finance as instruments for change:

Let me suggest that although regulation can be performed in a manner which is deadening and inhibiting, it can also be used as a means of encouraging educational improvement. The regulatory function can . . . be used to encourage more explicit statement of educational goals at the local level and to assure adequate justification of proposed new courses of action. This can be performed by communicating to local districts about means of defining goals operationally and assessing the degree of their attainment. In some cases, it may even be possible to stimulate Statewide participation in development of model educational objectives. As a regulator, the state education agency may require operational specification of objectives in proposals for Federal or discretionary State funds . . . or may even require by regulation that participation in certain State programs be based upon operationally-stated objectives or incentives be provided for undisputable evidence of satisfactory performance.

Since we know that community concern for and participation in educational dialogue enhances the innovativeness and responsiveness of schools, the state agency, in its leadership and in providing staff to elected State officials might well place emphasis on the need for effective two-way communication between the school and the community and may in time look toward regulations which mandate increased efforts towards such communication.

Finally, of course, the role of the State Agency in educational finance should be a powerful instrument in fostering educational change. This is unlikely to happen if all financial transactions between State and local educational agencies are based on formula grants. Most innovation involves some degree of risk-taking: it requires the potential for acquiring or reallocating money for trial and installation of changes, and unrewarded behavior is unlikely to persist.

Both in its administration of Federal funds and in State financial policy, it may be possible to provide "risk capital" for innovative programs as well as incentives for local schools to seek changes which lead to educational improvement. In such programs, it is highly advisable to require commitment of local funds to the innovative effort from the very beginning, with increasing allocation of local resources as the project progresses. There are data both in education and outside that an innovative program which involves the use of local monies from the beginning is more likely to be installed than one which receives full funding from outside sources.²⁰

Considerably before Pincus (1974) concluded that schools lack the incentives for innovation which exist in the commercial sector, Clemens appears to have reached a similar conclusion, but apparently saw the exercise of bureaucratic power as the public sector counterpart to the unseen hand of market forces in the commercial sector.

In sum, Clemens seems to have had a broad view of the change process in education and a vision of SEAs' potential to accelerate and enhance the process. In so doing, SEAs would mount programs of dissemination, but the effectiveness of dissemination would depend upon SEAs' ability and commitment to use dissemination as part of a coordinated program drawing on the full "resources for change" available to the agency. As we shall see, however, Clemens and his colleagues found it difficult to communicate this vision to SEA leaders and at a crucial point in their history, to the leadership of NIE.

Having discussed at some length Clemens' general vision of the SEA's role in affecting change, I wish to turn now to his specific ideas concerning the SEA's dissemination activity. A broader vision notwithstanding, dissemination still seemed to Clemens the process through which SEAs could exert the greatest and most immediate influence upon local change processes. SEAs could discharge their dissemination responsibilities best by establishing an information center to serve local districts. Such centers should certainly draw upon but should not be limited to ERIC as an information base. And it was crucial that centers be readily accessible because "practitioners make first and most frequent use of the most accessible information source, even when they believe that the source does not provide very good information." It follows then, that unless accurate information is at least as accessible as inaccurate information, it will be inaccurate information which will reach educators."²¹

Clemens went on to define (1) the functions such centers would perform (acquisition, processing, storage, search and retrieval, informational analysis, dissemination); (2) the products they would purvey ("basic" and "derived", the latter representing transformations of researchers' output into forms more suitable for practitioners); and (3) the services they would provide (query negotiation, output screening, and client briefing).

In light of criticisms offered later by the leadership of the new NIE, it is important to note that Clemens did not assume that a single information center would be adequate for any but the smallest states. Instead, he envisioned within each state a two-tiered system with a state level information resource center distributing services through a network of information specialists serving several small districts or a single large district. The specialists would be located in intermediate service agencies or in the central offices of large districts.

Initially, the central information center would provide direct services to SEA personnel and elected state officials, would provide some services to locals on a pilot basis, and would plan and orchestrate the development of local centers. When local centers were established, "perhaps with Title III or other Federal monies," the state center would assume a coordination and leadership role.

Anticipating the charge that a nationwide system of information centers would be prohibitively complex and expensive, Clemens countered by arguing that the costs could be minimized through interstate coordination and an allocation of different functions to the federal, state, and local levels. The federal government would supply the core information base through ERIC. Each state agency (presumably using its own money) would collect "documents" developed within the state, maintain its own file, and contribute items of more general utility to ERIC.

In all, Clemens' paper makes it clear that the Pilot State Dissemination Program was intended to be the first step in the development of a massive, complex dissemination network to be underwritten largely with federal funds, and that even this complex network was seen as one element in an effort by the federal government and state education agencies to stimulate and support educational change. We shall see what happened to this grand vision.

The Streams Flow Together: The Pilot State Dissemination Program

Drawing on the Havelock study and Clemens' ideas about SEAs, in the Spring of 1970 NCEC launched the Pilot State Dissemination Program. The Request for Proposals for the program explained the central idea with enviable clarity and economy.

The idea behind this program is simple: without a chain of interpersonal communication links through which validated information can pass effectively, major educational improvements, no matter how well tested, generally will not become widely known or adopted. The Office of Education wants to assist several SEA's to develop some pilot approaches designed to test ways of helping local school personnel to learn about, choose among, and if appropriate, adopt or adapt tested educational innovations. The pilot efforts will represent ways of maximizing interpersonal communication as a means of effecting educational improvement.²²

In the summer of 1970, NCEC made awards to three state education agencies to try out a program which NCEC officials saw as roughly analogous to the Cooperative Extension Service in the Agriculture Department. Each project was to serve two or three "target areas" (counties, LEAs, or sub-state regions). As specified in the RFP, a full-time field agent was assigned to each target area. Each project also included from one to seven full-time information

retrieval personnel. One SEA had its own facility for computerized searches; the other two used an established retrieval installation in their region. Providing back-up support were subject specialists from the SEA and other nearby institutions. Each project also had a full-time project director. All of these roles were specified in the RFP.

In addition to the grants to Oregon, South Carolina, and Utah, the Pilot State Program included two contracts, one to the University of Missouri to provide training for project personnel and one to Columbia University's Bureau of Applied Social Research to evaluate the program.

It Works: The Pilot State Dissemination Program According to Sieber

In September of 1972, Sam Sieber and his colleagues, Karen S. Louis and Loya Metzger at Columbia University's Bureau for Applied Social Research, published their evaluation of the three Pilot State Dissemination projects and the training contract. Sieber's reflective introduction to the report confesses to certain doubts about the program which he harbored before undertaking the evaluation. Partly on the basis of his participation in the Committee on Research Utilization of the American Educational Research Association -- a committee headed by Matthew B. Miles and which according to Sieber instigated Havelock's massive literature review -- Sieber had concluded that three basic strategies for knowledge utilization were being promoted: the Rational Man strategy, the Cooperator strategy, and the Powerless Functionary strategy. Sieber's doubts about the Pilot State program resulted from reflections on the program in light of his observations concerning these strategies. Accordingly, it will be useful to summarize them:

- Rational Man -- This approach is based on an image of the educator as a person eager to read, digest, and act upon the conclusions of research. It is characterized by a corresponding reliance on one-way, interpersonal communication. In this approach, Sieber wrote, "The enemy, very simply, is ignorance ERIC was only a more efficient newcomer to this strategy."²³ The Rational Man strategy is superficially attractive because of its low cost and broad coverage, but the product according to Sieber was "a dismal record of failure."²⁴
- Cooperator -- The Cooperator strategy is grounded in a view of the educator as inherently cooperative, but sometimes offering resistance to change because of situational anxiety or insecurity. The strategy relies on interpersonal, two-way communication in order to inspire security, bring out the educator's inherent cooperativeness, and thus overcome resistance to change. Sieber criticizes this view as time-consuming, lacking in "intellectual substance," and naive regarding constraints

imposed by the organizational settings in which practitioners are embedded.

- Powerless Functionary -- This approach treats the educator as a quasi-professional functionary powerless to resist law, rule, and the exercise of administrative authority. Its weakness, Sieber wrote, was naivete regarding the possibilities of evasion, veto, and sabotage.

Although the three models he advanced to sum up existing change strategies differ in some ways from those defined by Havelock, Sieber like Havelock concluded that while none of the strategies alone was adequate to effect improvement, an approach combining elements of all three would probably prove effective. His skepticism regarding the Pilot State program stemmed from a perception that the program incorporated elements of the first two strategies but omitted the crucial ingredient of power.

Yet Sieber concluded on the basis of a questionnaire survey of Pilot State clients, plus his observations of the program in action, that the program was extremely successful. Eighty-five percent (85%) of all clients reported that the service they received was valuable, and eighty percent (80%) reported they planned to use the service again. Over forty percent (40%) reported taking action on the basis of the information provided. (Although Sieber does not highlight the fact, an examination of his figures shows that nearly half of these clients reported using the information in planning or proposal writing and another one fifth or so gave vague responses indicating some unspecified utilization.)

Sieber attributed what he viewed as the success of the program largely to the work of the field agents. He described their work as including assistance in problem identification and diagnosis; securing information related to the problem through the retrieval staff; delivering and helping to interpret R&D results; helping to sort through and appraise the applicability of the retrieved information; assisting in planning for implementation; and sometimes helping with implementation and/or securing technical assistance from subject matter specialists in the SEA or other cooperating institutions. Over all, Sieber paints a picture of field agents providing sustained, face-to-face assistance, beginning with a deliberate effort to understand the true nature of the client's problem and extending well into implementation. Apparently, the field agents did not assume that utilization of their services in retrieving information (through back-up specialists) would automatically ensure utilization of the retrieved information to improve practice.

Sieber attributed the field agents' effectiveness to their status as generalists lacking any formal authority over their clients, but legitimized by the information they provided. Paradoxically, the fact that they were not experts in most of the problems or subject matter areas with which they dealt worked to their

advantage, he concluded. It enabled them to elicit trust; this in turn led to invitations to assist with utilization of the information they delivered. "At some slight risk of being misunderstood, then, the field agents could be characterized as undercover change agents in the guise of information specialists. It was the information role that gave legitimacy to their presence and activities in the schools, but it was the change agent role that got things done."25

Having tried to explain the field agents' effectiveness by pointing to their status as generalists with respect to problems and specialists in information, Sieber remains unsatisfied. What about the element of power which he believed was critical to the change process? "How could innovation take place without the manipulation of organizational structure? If the agents were devoid of power in the client system, how could they overcome those structural barriers to change which are so often advanced by theorists to account for institutional conservatism?" Sieber asked. He then went on to respond: "The answer is simple. The agents did use the power structure, but on an informal basis. Rarely was a principal or superintendent and his staff uninvolved at some point in the field agent's work with lower level personnel, and frequently these administrators were used as leverages for change."26

Field agents were able to manipulate the power structure of client systems, Sieber observed, not only because they were generalists, but also because they were outsiders. A perception of the field agents as neutral with respect to role groups (e.g., administrators, teachers), cliques, and other social divisions enhanced their acceptability and the credibility of the information they purveyed. "Attempts to shed one's official status in order to influence the deliberations and actions of either superiors or subordinates would probably be met with frustration by insiders trying to play the role of information specialists," Sieber wrote. "Indeed, our own research shows that such individuals are far less successful than field agents in gaining the appreciation of clients and in stimulating the utilization of knowledge."

In addition to the conclusions that the Pilot State projects were "successful" and that their success could be attributed in large measure to the work of the field agents, Sieber and his colleagues also offered a number of more specific findings that deserve mention:

1. Assistance Preferred Over Information. All types of clients served by the projects (teachers, administrators, and SEA personnel) found the interpersonal assistance they were afforded more useful than the information they received -- "or to use our terminology in the Introduction, the Cooperator strategy is more highly valued than the Rational Man strategy."27 All types of clients were also about equally satisfied with the service.

2. Generalists Superior to Specialists. A corollary of Sieber's conclusion that field agents accounted for the success of the Pilot State Program is that the field agent generalists were more effective than subject matter specialist consultants in inducing educational change. Sieber argued that the retrieval staff who supplied field agents with information were at least as valuable as subject matter specialists in all three states. Accordingly, Sieber suggested that the best way to use SEA consultants in the future would be to attach them as auxiliary personnel to statewide dissemination-extension systems.
3. Program Stimulates Demand. A strong majority of clients (76-90%, depending on target area) reported planning to use the service again. Virtually all respondents said they would recommend it to others, and a large majority (58-90%) said they had already done so. From this, Sieber concluded that the program stimulated considerable demand. (As we shall see, the question of creating demand for R&D results later became an important one in the conflict between NCEC people and the leadership of the new NIE. There is no indication, however, that Sieber's contention ever came to the attention of the NIE leadership.)

Before turning to the next section in the State Dissemination Capacity Building Program pre-history, it is important to make some brief observations on the overall character, tone, and focus of Sieber's Pilot State evaluation report. First of all, it is massive. Volume I, which contains the main body of the report, runs to 593 pages. Volume II includes three case studies of field agents in action, a number of program and evaluation project documents, plus instruments, tables, and the like. It rivals the bulk of Volume I.

The bulk is important because it reflects the nature of the study -- meticulous, detailed, encyclopedic, and above all, formative. That is, it comes across not as a skeptical effort to measure the effects and weigh the merits of the program, but far more as a committed effort to develop understandings and guidelines to ensure the effectiveness of future SEA dissemination projects. Through most of the text (about 500 pages of it), the implicit questions seem to be, "What's good about this? What's bad or ineffective? How could it be done better?" The assumption, quite clearly and understandably, was that this was indeed a pilot project, the opening wedge in a much larger program of extension agents. Data on outcomes were collected, and one may certainly assume that if these had been negative or disappointing, Sieber and his colleagues would have reported and interpreted them candidly. It is not a question of bias, but one of purpose and focus. The detailed examination of project structure, personnel, training, and operations produced a serviceable set of recommendations and guidelines. To skeptics about the whole notion of extension agents, however, it did not come across as a

theoretically and empirically sophisticated piece of social science. In the early days of NIE, this would prove a distinct liability.

Extension Agents and Educational Renewal

In 1971, the nascent educational extension agent system to which the Pilot State program was expected to contribute practical knowledge and political momentum reached a new high in visibility and expectations. It became part of the Educational Renewal Plan conceived by USOE Deputy Commissioner Don Davies and Commissioner Sidney Marland, with the active support of HEW Secretary Elliott Richardson.

To understand the Renewal Plan, which almost ballooned NCEC's state level experiment into a huge, fully operational educational extension agent program, one needs a bit of background on the Bureau of Education Professions Development. The Education Professions Development Act (EPDA) had been passed in 1967 to bring together all "manpower training" programs in the U.S. Office of Education.²⁸ Its objectives were to increase administrative efficiency and to enable USOE to keep up with and respond to changing human resource needs in the education systems. The Bureau of Education Professions Development (BEPD) was created to administer the Act.

EPDA was largely discretionary rather than categorical, so the allocation of the Bureau's appropriations fell to the Commissioner and his Associate Commissioner for the Bureau. By 1971, BEPD comprised fifteen programs, all with separate regulations and guidelines and all contending for the same limited dollars. Further, the teacher shortage that had stimulated creation of the Bureau had been transformed into a teacher surplus. Thus, BEPD had become a prime candidate for budget cutting. In fact, elimination was not out of the question.

Early in 1971, BEPD Associate Commissioner Don Davies conceived the Educational Renewal program partly as a solution to this set of bureaucratic and political problems, and partly for more substantive reasons -- as a way of creating "an engine for school reform."²⁹ At this point in its evolution, Renewal would have consolidated the fifteen BEPD programs into one (reducing administrative complexity and eliminating internal competition for funds) and focused the Bureau on inservice rather than preservice training (neutralizing the budgetary threat posed by the teacher surplus).

In addition to the political and bureaucratic motivations, there was a major substantive idea behind Renewal. Substantively, the idea was to make a fundamental institutional change in the relationships among teachers, school districts, and institutions of higher education. By putting dollars for inservice in the hands of LEAs, the theory went, the program would result in a tighter link among the courses which teachers took for

recertification, the real-world demands of the classroom, and the priority goals of local school districts.

Renewal also contemplated a shift in power within local districts. The authority to set priorities for inservice education would be vested in councils made up of teachers and other citizens as well as administrators. In terms of representation, lay people were to have "parity" with professional educators. The notions of school-community councils with authority over inservice and of "parity" between educators and citizens had been key features of the smaller, experimental Urban/Rural School Development Program which Davies had launched earlier.

Before Renewal could be implemented at the Bureau level, however, it was dramatically transformed and expanded by political events affecting the entire Office of Education. That is, various Nixon administration initiatives threatened to reduce USOE to the status of a check writing agency. Domestic Council Chairman, Daniel P. Moynihan, opined that the Johnson administration's Great Society programs had failed, and that there should be no major new federal education initiatives in education until new ideas proved out successfully on a small scale experimental basis. He urged creation of a National Institute of Education to carry out the research.

At the same time, it was reasoned that if the federal programs administered by USOE had failed, then there was no justification for maintaining a large number of separate programs, each with its own complex and burdensome regulations and expensive administrative apparatus. The idea of special revenue sharing -- blocks of funds which each state would be free to use as it saw fit -- was advanced as an alternative to what was seen as a profusion of narrow categorical programs. It was argued that the administrative simplification thus achieved would also effect savings, permitting budget cuts without sacrificing actual services to children.

Summarizing, to achieve educational improvement, the federal government would lead with ideas rather than pushing with programs. NIE would produce the ideas, test them, and disseminate them for replication. The instrument for educational improvement would be science, not dollars with strings attached.

Commissioner Sidney Marland and other high-ranking USOE officials feared this would leave the agency without a distinctive role in educational reform and with a shrinking budget. In a strategy meeting held in April 1971, Associate Commissioner Davies advanced his Renewal idea -- originally conceived as a solution to his own Bureau's political problem -- as the solution to the problem faced by the entire Office of Education. Now the Renewal strategy of consolidating discretionary funds was extended to selected programs across the whole agency. Through a single grant application, local education agencies could obtain their share of

the consolidated funds and could use the money to address any problems that local people identified. Renewal would represent "a problem, not a program, approach" -- a BEPD formulation which Davies saw as happily consistent with views favored in the White House.

To be effective as a solution to USOE's political problems, however, Renewal had to do more than merely appear consistent with White House inclinations toward consolidation and revenue sharing: it had to articulate a role for USOE that was at once distinctive from and complementary to the administration's other important initiative, creation of a National Institute of Education. This is where the second major component of Renewal came in -- the educational extension agent program built upon NCEC's Pilot State beginnings. State-level Renewal centers -- none other than Clemens' state information centers in a new guise -- would disseminate the NIE's research and innovations to local renewal centers, where teachers would be trained in using the new ideas. In this way, Renewal would complement both the NIE and special revenue sharing proposals: NIE would do research; Renewal would disseminate it and provide for inservice training; and special revenue sharing would supply some relatively unrestricted funds which local education agencies could use to offset the costs of change.

Davies also believed that the extension agent component would help secure Chief State School Officers' support for Renewal, as the Pilot State program had begun to do for NCEC. In fact, according to Davies the extension agent component was originally "the result of a compromise we worked out with Byron Hansford of the Council of Chief State School Officers."³⁰ The CCSSO had been disturbed by Renewal's apparent bypassing of the states. Apparently, the compromise worked well, as Davies reports that the Chiefs did give Renewal active support.

But the Chiefs were among the few supporters of Renewal. "Most people in the bureaucracy opposed it," Davies says, because it would have required a reorganization that threatened their turf. "The bilingual folks" also opposed it, he says, because they feared that special programs for children with limited English proficiency would not enjoy a high priority among local education agencies. To protect their position, they went to Senator Alan Cranston of California. "We took the bilingual money out [of the plan to consolidate separate programs] but by that time Cranston was already opposed and the damage was done," Davies recalls.

Schools of education were also vociferously opposed. Harvard Graduate School of Education (HGSE) Dean TheodoreSizer was a particularly strong and effective opponent, says Davies, "even though Ted and I got along very well personally." Davies attributes HGSE's opposition to the prospect that the school might lose EPDA money, especially a major grant from the "Triple T" (Trainers of Teacher Trainers) program. Opposition from HGSE was especially effective, Davies says, because Congressman John

Brademas, Chairman of the House, was a member of Harvard's Board of Overseers and both liked and respected several people associated with HGSE, including Professor Daniel P. Moynihan.

Brademas' opposition was not, of course, attributable exclusively or even primarily to his ties to Harvard. Far more important, Davies says, was the enmity which had developed toward President Nixon in the predominantly Democratic Congress. A number of Nixon administration actions (e.g., impoundment of appropriated funds) had engendered bitter resentment in a Congress traditionally jealous of its prerogatives. Renewal appeared to be one more attempt to bring about changes through executive action that many in the Congress thought could be properly achieved only through legislation. Davies says he personally favored proposing new legislation. HEW Secretary Richardson and Commissioner Marland, however, were unwilling to propose new legislation for Renewal because the White House position generally was that no new legislation was needed. Better administration of laws already on the books was all that was required.

As he planned for Renewal, Davies believed that as a Democrat whom the Nixon White House had been reluctant to approve for the position of Deputy Commissioner -- he was Marland's choice -- he would be able to secure support from or at least neutralize opposition by key committees in the Democratically controlled Congress. "But it didn't work out that way," he recalls, "because I guess they figured I was working for a Republican, and I must be on the other side."

When Davies and Marland tried to persuade Brademas of the merits of Renewal as part of a "three-part package" -- along with NIE and special revenue sharing -- Brademas thought "we were just trying to salvage OE. He thought we were trying to end-run NIE." This perception was partly accurate, says Davies. "There was something in that. We were trying to make sure OE didn't lose out completely in this area."

If Brademas was so angry about Nixon administration intrusions upon Congressional authority, why did he become the chief spokesperson in the Congress for the administration's proposal to create NIE? Davies attributes Brademas' enthusiasm for NIE to his relationship with Daniel P. Moynihan, formerly of the Harvard Graduate School of Education and by this time Nixon's chief domestic advisor.

For whatever reasons, Brademas did oppose Renewal and support NIE, and he or his staff took special pains to ensure that leadership in dissemination would rest squarely with NIE. The authorizing legislation for NIE goes into considerable detail concerning the Institute's responsibilities in this area. In the end, Renewal was aborted and NIE was created. According to Clemens (1976), the Congress nevertheless appropriated \$15,000,000 in FY 1972 to implement the extension agent portion of the plan. Upon establishment of NIE, the extension agent appropriation (along

with the rest of NCEC's programs) was transferred to the new agency.

The Creation of NIE and the Great Chivas Regal Showdown

As the previous section suggested, the reorganization through which the National Center for Educational Communication was created failed to mollify critics of USOE's handling of research. The drumbeat of criticism from the Congress went on, and was taken up with a new fervor by the Nixon White House. From the office of White House domestic advisor Daniel P. Moynihan came the proposal for a new National Institute of Education. The creation of NIE in 1972 -- just as Sieber was completing his study of the Pilot State Dissemination Program -- spelled an end to NCEC's burgeoning program of support for dissemination by state education agencies.

To review, late in the legislative process, the NIE bill's Congressional sponsors added provisions which conferred broad dissemination responsibilities upon the new agency. And despite opposition from USOE, the bill specifically mandated transfer of NCEC activities to the new Institute. The transfer took place in August of 1972. In January of 1973, NIE Director Thomas Glennan conducted a review of NCEC's ongoing activities and plans. From the viewpoint of Lee Burchinal and his colleagues, the tone of the review was thoroughly negative. ERIC and the state dissemination program were perceived as purveyors of research which several Glennan advisors viewed as mostly second-rate.

Further, some argued that practicing educators seldom used formal information systems, preferring to rely upon trusted colleagues for information and advice. The real problem, these advisors claimed, was not to build elaborate dissemination programs, but to improve schools' organizational capabilities for self-examination and self-improvement. Until local school districts' and schools' problem-solving capacity was increased, they couldn't be expected to use research to improve practice. It was, as Glennan later put it, a "demand side" problem.³¹ (The local problem solving argument is discussed more fully in the next chapter.)

A third criticism of NCEC's plans applied specifically to the program of support for dissemination through state education agencies. Compared with the previous two arguments, this one seems oddly detailed. The ratio of field agents to practitioners was held to be inadequate. A few field agents located in the state education agency could never hope to serve any substantial proportion of the local educators in the state. The real issue here seems to have been the credibility of NCEC's figures for what a full-blown extension agent system would cost. If many more field agents were required than NCEC had estimated, the system would prove too expensive for the new agency. Or at the least, the dissemination system would consume too large a percentage of the agency's budget. After all, it was argued, NIE had been set up to find new answers through research, not to disseminate the old answers more broadly.

A fourth, very important criticism in the mind of one of Glennan's reviewers may not have been spoken during the meeting: the staffs of state and intermediate education agencies simply weren't very impressive.³² SEAs didn't and probably couldn't recruit and hold energetic, sophisticated change agents in the required numbers. One certainly encountered talented individuals in some SEAs, but on the whole, SEA personnel were not up to the job. Too many were left over from the pre-ESEA days when state education agencies' salary schedules were frequently lower than those of local districts and when staff were hired through old boy networks of influential local superintendents.

It is not clear whether other participants in the review shared this perception of state education agencies. It is clear, however, that many people at NIE regarded them with an air of superiority. As we shall soon see, the Institute later paid a heavy price for this perception.

At the close of the day-long review meeting, Glennan asked NCEC staff to revise or provide more justification for their plans. Apparently because they thought it pointless to do so and because Burchinal soon departed to take a position at the National Science Foundation, leaving some confusion in the unit, NCEC never submitted the requested material. As a consequence, there was little to prevent Glennan from terminating the state dissemination program.

The Interstate Project on Dissemination

When NIE was established, its leaders looked forward to a generous grace period before the new agency would be called to account. They believed the Institute had strong support from the White House and a mandate from the Congress to produce sweeping new conceptions of learning and teaching. A thoroughgoing revision of fundamental educational ideas was clearly going to take time.

Unfortunately for the Institute, these perceptions and expectations were almost entirely unfounded. Daniel P. Moynihan, the agency's only powerful supporter in the White House, was felled by the publication of his confidential memorandum urging the President to adopt a policy of "benign neglect" toward the problems of Blacks. The Congressional "mandate" was actually a probationary sentence. Many in the Congress had grown skeptical about the utility of educational R&D. They were willing to give NIE one more chance to clean up the mess which USOE had made. But it had better be quick. And it wasn't a re-thinking of fundamental issues they wanted, but practical, problem-focused research.

During its first two years, the Institute's leaders presumed that they could afford to ignore political considerations and concentrate on substantive issues and on building a new organization. In the process, they alienated a number of important potential supporters, including key Congressional staff

members, directors of the USOE-created regional laboratories and university-based R&D centers, and the Chief State School Officers. Opposition from these groups emboldened already skeptical members of Congress, and by August of 1974 Congressional pressure was severe enough to force Director Thomas Glennan's resignation.

One of the actions which alienated the Chief State School Officers was Glennan's decision to terminate the Pilot State Dissemination Program and to cancel plans to scale the pilot program up to a major education extension agent program. State education agencies couldn't expect to receive any significant portion of the Institute's research funds, but some among them had counted on receiving both the dollars for dissemination and the symbolic recognition which the dollars would have conferred.

In retrospect, Glennan views his termination of the Pilot State Program as "a real error, not so much for substantive reasons as for political reasons."³³ Even before Glennan's departure, the Institute had initiated a cautious effort to win the Chiefs back. In February 1974, Glennan and Deputy Director Emerson Elliott had instructed officials in the dissemination unit to meet with representatives of the Council of Chief State School Officers and of some SEAs previously involved in the Pilot State program. This resulted in funding of the Interstate Project on Dissemination, a CCSSO-administered study of how state education agencies might serve as intermediaries between federal R&D agencies and local school districts to achieve broad utilization of R&D in the schools.

Although the Interstate Project on Dissemination (IPOD) did not issue its formal report until January of 1976, through continuing conversations between IPOD members and NIE dissemination officials, the project strongly influenced the shape of the State Dissemination Capacity Building Program which NIE launched in January of 1975. For this reason, some description and analysis of the IPOD report should advance our understanding of the State Capacity Building Program.

The project originally defined three objectives for itself: (1) to synthesize from earlier SEA and federal statements a position on state-federal relations in dissemination, (2) to analyze federal requirements concerning dissemination in law and rule, and (3) to develop a framework for planning comprehensive state dissemination programs.

Tracing the evolution of federal-state relations in dissemination, the report notes that before NIE was established, a large number of separate legislative mandates for dissemination had led to the creation of many separate programs. Even though the Conference Committee on the bill authorizing NIE specified that NIE was to take major responsibility for dissemination while USOE was limited to certain residual information functions, the pre-existing framework of separate programs with separate dissemination

activities (especially vocational education and special education) continued to operate at USOE. To make matters worse, the report said, NIE Director Thomas Glennan had decided that dissemination was a matter for study and reassessment, not for operational funding. The Council of Chief State School Officers had already rejoined that dissemination should be a major budgetary priority, that operational dissemination activities and not theorizing should be funded, and that SEAs should be the primary intermediaries between NIE and local districts.

A number of statements from the Council and from individual Chiefs were quoted to underline the point that SEAs are for constitutional and practical reasons the only logical link between federal research and local practice. Many SEAs were also said to be developing dissemination systems, but to need more funds and support to make the systems coordinated and comprehensive.

The project's examination of federal educational dissemination requirements revealed a total of 208 requirements assigning responsibility to 54 different agents or agencies. The report concluded that "there is no system for disseminating educational products and practices":

The word "system" implies that the component units of an aggregate exist and operate in unison or concord according to a coherent plan for smooth functioning. When Congress authorized the National Institute of Education, one of its legislatively mandated purposes was to "build an effective research and development system." Since then the Congress has engaged in heated debate over appropriations bills for the Institute and has drastically reduced the level of funding for the Institute. Is it possible that cumulative Congressional action over the years, as reflected in the Compilation of Federal Education Laws, has compounded the very problem that action sought to alleviate? Is it possible that competent, well-intentioned administrators in federal agencies have compounded the problem while drafting regulations to implement the legislation? Yes, it is possible and yes, evidence exists to indicate that it is probable.³⁴

Because most federal education dollars flow through SEAs, the report argued, state education agencies bear the brunt of the proliferation problem. Yet limitations on the percentage of federal funds which states may use for administration means that the resources are not commensurate with the burden. There was in all this a tacit appeal for decategorization or deregulation of federal dollars. Until such action, SEAs would simply have to struggle with the coordination problem; the least the Institute could do is to provide some funds to support the struggle. There was also a rather explicit argument that federally sponsored R&D was not working because there was no real system for getting it into practice, not because the products of R&D were faulty. And

further, the problem behind the problem was Congress itself, not educators or education researchers. The Congress, it was argued, had created a non-system. It was erroneous to conclude that the R&D system had failed -- there simply was no such system. In effect, NIE was predicated on an incorrect diagnosis of the problem. A correct diagnosis would call for comprehensive, integrated systems of dissemination at the state level.

The IPOD framework for developing such integrated systems appears to have received substantially less attention than the material directed to the project's first two objectives. Yet, from the point of view of then-contemporary public management ideas, the framework was quite sophisticated. That is, it was explicitly grounded in a systems perspective of the PPBS and MBO variety: "The assumption is made here that the Chief State School Officer and the agency's top management staff have established long and short range goals and objectives which force them to view SEA resources as elements of systems rather than as relatively discrete programs or units."³⁵ As we shall see, however, there is reason to question whether many Chief State School Officers actually do think and act in these terms.

The entire planning framework was built around a definition of dissemination which emphasized (1) "two-way sharing" of information concerning needs and problems of local districts as well as R&D products, (2) technical assistance and consultation that support both rational choice and effective use of R&D, and (3) perhaps most surprisingly, assistance to local districts "in building a capacity for information seeking and utilization and, on a broader scale, for self-renewal."³⁶ Concerning the last of these elements, a principal author of the framework recalls being impressed and strongly influenced by the NIE report, Building Capacity for Renewal and Reform.³⁷ Building Capacity was, in effect, the manifesto of the Local Problem Solving Group whose arguments had contributed to the termination of the Pilot State Dissemination Program. Even so, the developers of the IPOD framework incorporated it into their thinking rather than simply rejecting it as politically alien. (Building Capacity and the rest of the Local Problem Solving Program are discussed at some length in the next chapter of this volume.)

The IPOD planning framework urged SEAs to conceive themselves as "linking organizations" and proceeded to lay out a conception of linkage and of the state role which owes a great deal to Havelock. In addition to a linkage component and the information component on which "linkers" must draw, the framework proposed an incentives component:

Essentially the incentives component is a system of "pushes and pulls," of a judicious use of positive and negative motivations. The selection and use of incentives is a critical factor in all dissemination activities and for this reason is treated as a major component of the dissemination system.

While the ideal stressed in this document is leadership and service through collaborative affiliation with LEAs, the incentives component recognizes that an SEA may use a predominantly regulatory approach in bringing about improvement in educational programs in local schools. The philosophy and legislative mandate of SEAs is more directed to "pushes" than to "pulls," to a view of change that assumes a strong guiding hand being used by the SEA. Other SEAs operate in a context in which "pulls" and "carrots" are the primary vehicles for working with schools. This report suggests an approach which stresses collaborative affiliation between SEAs and LEAs, a situation in which objectives are negotiated and in which the SEA seeks to assist the LEA organization in building a standing capacity for improving and maintaining the system. Much of the literature on change supports the "pulls" approach to facilitating change and improvement.³⁸

With incentives as with building problem solving capacity, the framework was influenced by the Local Problem Solving Group, or more specifically by a paper on incentives for change which the Problem Solving Group had commissioned from John Pincus of the Rand Corporation.³⁹ The notion of coordinating dissemination with the exercise of SEA regulatory powers also closely parallels Thomas Clemens' ideas as presented earlier in this chapter.

Summarizing, the report defined an SEA dissemination system as "an integrated and coordinated set of information, linkage, and incentive activities and resources directed to specific SEA goals and objectives."⁴⁰ The report did not entertain the possibility that its emphasis on responsiveness to client needs may conflict with an orientation to "specific SEA goals and objectives." That is, only if the SEA's highest priority goal is to help local districts solve their problems as local districts perceive them will the SEA's goals necessarily be consistent with its clients' goals. In a number of SEAs, the distinction between SEA and district goals turns out to be an important one. I shall say more about this later in this chapter.

The State Dissemination Capacity Building Program: The Phoenix Rises

To reiterate, by August of 1974, political pressure had mounted sufficiently to force NIE Director Thomas Glennan to resign. Upon Glennan's resignation, Acting Director Emerson Elliott "made a very explicit decision that we were going to have to do something for the Chiefs."⁴¹ Soon after, operational planning for the State Dissemination Capacity Building Program began.

In January of 1975, NIE issued a grants announcement for the State Dissemination Capacity Building Program and for an adjunct program of smaller special purpose grants. According to the announcement, Capacity Building grants were intended to support the development

of "comprehensive and generalized" dissemination systems in state education agencies. The term "comprehensive" meant that the system should include three elements:

- (a) a full range of resources including data, documents, products, and technical expertise;
- (b) means of linking the client group to the resource base;
- (c) leadership and management arrangements which facilitate provision of services on any problem to all members of client group.⁴²

It was required that all three elements be addressed in an SEA's application, but considerable discretion was left to the states to set priorities and allocate resources among the three.

The term "generalized" essentially stressed the latter part of point (c). That is, there was to be no restriction as to topic or area of inquiry, and none as to clients' subject area or role. Here again, however, the announcement was flexible. An SEA could concentrate initially on some subject area or client group. It was required only that the plan have generalized capacity building as its outcome.

Concerning the first element of a comprehensive system, information resources, the announcement noted, "ERIC materials can provide a nucleus around which a comprehensive net of resources can be developed, but SEA projects are encouraged to make available additional sources of knowledge."⁴³ States were also encouraged to include the functions of question negotiation, screening, information transformation, synthesis, and evaluation of the utility of information -- not to limit themselves to simple search, retrieval, and delivery.

Regarding linkage, the Pilot State finding concerning the importance of person-to-person intervention was cited, but once more, broad discretion was left individual states: "Subsequent experience with alternative SEA linkage models in six agencies supports a belief that linkage programs can be effectively designed within a state to meet its specific needs and circumstances."⁴⁴

"Leadership" appears to have embraced two notions. First, coordination of disparate activities to facilitate what program officials sometimes called "one-stop shopping" by clients, regardless of role or problem area. Second and somewhat less explicitly stated is the hope that project leaders will enhance the position of the dissemination function within the agency: "The director of a project can provide leadership for the SEA's dissemination activity if that director is a senior member of the State agency staff."⁴⁵

In the first year of the program, 1975, ten states were awarded capacity building grants. In 1976, fourteen additional states received capacity building awards. In 1977, six more capacity building grants were made. Four awards were made in 1978, and ten in early 1980. In all, forty-one states plus the Virgin Islands, the District of Columbia, and Puerto Rico have received capacity building grants. Awards have averaged approximately \$100,000 annually. Technically, the awards are for a single year but are renewable for from three to five years. In addition to the major capacity building grants, seventeen special purpose awards were made through 1980. In many cases, these were used for planning larger efforts.

The NTS Evaluation

In October of 1976, NIE awarded a contract to the NTS Research Corporation to study the State Dissemination Grants Program. After a design, instrumentation, and clearance phase lasting from October of 1976 until August of 1978, data collection for the evaluation commenced in September of 1978. The study employed a combination of NCES statistical data, document review, questionnaires, and on-site interviews for survey purposes. The survey was supplemented by more in-depth case studies of five projects. A virtually final draft of the principal study report was submitted in December of 1980.

The study was directed to three major research questions:

- Is dissemination capacity being built?
- What are the factors affecting building of capacity? What helps and hinders achievement of program objectives?
- What program management and program design factors affect the building of capacity?

The NTS response to the first question is that capacity is indeed being built. State dissemination units can provide access to substantially broadened and varied knowledge resource bases. Existing structural arrangements have been modified to permit "information brokers" to deliver information to clients. Coordination has also improved, though the improvement has largely occurred among generic programs such as the National Diffusion Network and Title IV of ESEA, not between the project and content specific programs such as vocational education and education of the handicapped. Finally, there is some evidence that states are institutionalizing their improved capacities, "although it is still too soon in that process to determine if the dissemination system will indeed become an accepted part of SEA program services offerings."46

As might be expected in a broadly permissive program, NTS found considerable state-to-state variation in the patterns of developing capacity. For example, SEAs differed in the degree to which they directly controlled and operated linkage activities versus coordinating or encouraging linkage activities by intermediate or other agencies outside the SEA. There was, however, a distinct tendency in the resource base area to expand by building files of promising practices and other within-state information files.

Two categories of factors affecting project success were examined: (1) state factors and (2) program design and management factors. At the state level, "continuity of energetic and entrepreneurial leadership" was found to favor success, but by the same token, the departure or transfer of effective leaders jeopardizes "the process." Support from top administrators is crucial to building and institutionalizing capacity. Previous experience in dissemination is helpful but insufficient to ensure institutionalization. Placement in an administrative unit favors coordination and comprehensiveness, while placement of the project in a service unit favors delivery of services and institutionalization. Finally, and somewhat paradoxically, the strategy of focusing early efforts on a particular clientele appears to enhance coordination and comprehensiveness; yet, the report cautions, "the project needs to move on to serve the general clientele if institutionalization is to be enhanced."⁴⁷

Concerning program design and management factors, the report is somewhat more critical. Collaborative planning and flexibility in guidelines have permitted the emergence of projects suited to each state's context, but "may also foster areas on non-clarity of purpose between NIE and the states." Provisions for interstate communication and for technical assistance have been inadequate, as NIE staff resources allocated to the program have been. Quite significantly, especially in light of The NETWORK's state level research, reported later in this chapter, the report notes that:

Program objectives regarding the role of the dissemination system in relation to a state's other school improvement process are not adequately specified in program guidelines and project proposals. The result is that the potential for facilitating the use of new knowledge and educational practices for school improvement and equal educational opportunity is only partly seen and realized in many SCBP [State Capacity Building Program] states.⁴⁸

Although the report is very circumspect in its criticism of the State Capacity Building Program, by inference one may conclude that despite Thomas Clemens' and IPOD's urgings, coordination of the SEA's power to regulate and reward with the SEA's ability to provide dissemination and technical assistance services is relatively rare.

Finally, it is rather difficult to determine from the report just how much robust, sustained interpersonal assistance is actually being provided as a result of the State Capacity Building Program. This is true in part because NTS was asked to concentrate its efforts on determining whether "capacity is being built" rather than on whether that "capacity" is being employed to support effective utilization of research for school improvement. Another source of the ambiguity about "capacity," especially in the linkage area, is the ambiguity of the concept itself as defined in SCBP documents and other program communications. Capacity, and especially "comprehensive and generalized" capacity, is an extremely elusive concept. As the next chapter demonstrates, the Local Problem Solving Program foundered on a very similar concept applied to the local level -- school capacity for problem solving.

To their credit, the NTS researchers do raise and discuss the issue. At various points in the report, NTS criticizes NIE for failing to define very clearly just what a "linker" actually does and for failing to deal adequately with the relationship between SCBP and state education agencies' own state-initiated school improvement programs. NTS recognizes that the Institute was constrained by political realities to leave broad discretion to the states, but notes that through "leadership" rather than regulation -- presumably referring to hard thinking about the meaning of "linkage" followed by papers, workshops, seminars, and the like to educate grant recipients about core linkage functions and permissible variations in performing them -- NIE might have communicated a specific and helpful definition. In the absence of such clarity, NTS complains, it is difficult to tell whether SEA personnel designated as "linkers" are restricting themselves to searching for and delivering information or are going on to provide the utilization support found essential in the Pilot State Program. Thus, while "capacity" is apparently being built, in many cases the question remains, "Capacity for what?"

Concerning the failure to address adequately the relationship between SCBP and states' own school improvement initiatives, the criticism is of a different sort. First, the ambiguity is said to contribute to a tendency for SEAs to create new and separate units for dissemination and to designate these units' personnel as "linkers," even when it might be wiser to examine the work of existing personnel to determine which of them may already be performing linkage functions and how their work might be enhanced.

The second difficulty here is that the creation of separate units tends to leave the dissemination function isolated from other school improvement programs:

In other words, . . . will the linkage agents be separate from other SEA change efforts, integrated into the SEA effort, or adopted as the official policy and procedure of the SEA? The realities of the bureaucratic entrenchment and economics of the SEA must be taken into

account. To date it does not appear that NIE has provided any leadership in planning for these contingencies. Therefore it continues to be an undefined area, and an area which provides the greatest inhibition to the utilization of the dissemination system as a source of school improvement assistance.⁴⁹

The section which follows draws upon The NETWORK's state level research to enlarge upon the significance of these observations.

Some Observations from The NETWORK's Research in SEAs

As part of the Study of Dissemination Efforts Supporting School Improvement carried out by The NETWORK from October of 1978 through December of 1981, we examined dissemination activities in ten states across the country. The states were selected to be representative of the continental United States on several dimensions, including geographic size, population, wealth, and the like. It was not our object to evaluate the State Dissemination Capacity Building Program in particular, nor the state's dissemination activities in general. Our attempt was to describe the full range of dissemination activities in the selected states and to understand how and why dissemination had developed as it had in each state. That is, we looked at the SEA in its institutional (political, organizational, cultural) context, and at dissemination within the agency in this context.

Although we did not focus solely on the SCBP projects in selected states, our interviews and document reviews did provide the basis for some observations on the implementation of the program.

Our research in SEAs identified few Chief State School Officers with an interest in building a "comprehensive, generalized" dissemination system. Half our sample of ten states were quiet, stable organizations carrying out basic functions in a maintenance mode of operation. Resource constraints, traditions of localism, and a leadership style consistent with these constraints and traditions meant that Capacity Building projects were undertaken largely because dollars were available and a habit of applying for available federal dollars had developed. In these states, Capacity Building projects took their place along side an accumulation of other federal programs, attracting little attention from the Chief and evoking little more than polite indifference from the other projects whose dissemination activities they were intended to coordinate.

Among more activist SEAs -- those whose resources, traditions, and leadership encouraged what we called a development mode of organizational behavior -- the leadership of two agencies maintained a resolute focus upon priority problems identified by the SEA. (In both cases, these related to minimum competencies.) The Chief in one of these agencies expressed an aversion to discussing dissemination as a generic function. He believed that attending to functions or processes in isolation from the goals

they are intended to achieve contributes to organizations' natural tendency to displace energy and attention from the organization's goals onto bureaucratic routines and the personal preoccupations of its incumbents. He converted the Capacity Building project from its "generalized, comprehensive" orientation into a project to provide information that furthers implementation of his top priority minimum competency program.

The remaining three activist SEAs emphasized development of structures and processes to enable local schools to address improvement priorities of their own choosing rather than priorities specified by the SEA. But the principal school improvement program in one of these states was founded upon the premise that individual schools' own capacities for problem solving, not R&D disseminated from external sources, were the real engines of change. Dissemination was viewed as an outmoded, failed strategy, rightly displaced by a new localism. Although the SEA applied for and received a capacity building grant, only the public relations aspects of the project were linked in any meaningful way to the main school improvement program.

The core policy orientation of another state was far more consistent with the "comprehensive, generalized dissemination system" idea at the heart of the State Dissemination Capacity Building Program. That is, the SEA saw its role as one of helping local districts address problems they have identified, and to this end established a network of intermediate units which provided a broad range of information and assistance. SCBP funds did appear to enhance the performance of this integrated system.

The third activist state was attempting to combine assistance to improve local problem solving capacities with the provision of external assistance: the SCBP project in this state was the main focus of an attempt to integrate existing dissemination capacities with the new school improvement program.

In all, the effectiveness of the SCBP appeared to depend in large measure upon the degree of activism and the central policy orientation of recipient SEAs, and a small minority of SEAs in our sample were both activist and oriented to the provision of comprehensive, generalized assistance.

Problem, Strategy, and Assumptions in the State Dissemination Capacity Building Program

This chapter has told the complex story of the State Dissemination Capacity Building Program and its antecedents. Along the way, the chapter has discussed the program's definition of the dissemination problem, described the program's strategy for solving the problem, presented many of the assumptions underlying the strategy, and described how the program appears to have worked out in implementation. This section provides a less historical and more concisely analytical treatment of the program's problem definition, strategy, assumptions, and experience.

Definition of the Problem

The State Dissemination Capacity Building Program set out to solve two problems: (1) a lack of interpersonal assistance to support research utilization by practitioners and administrators, and (2) the profusion of uncoordinated federal dissemination programs.

Strategy

The strategy was to fund state education agencies to: (1) develop "comprehensive, generalized" systems to extend research information to local educators through in-person assistance, and (2) coordinate diverse dissemination activities at the state level.

Assumptions Regarding Conditions for School Improvement

- that research information is necessary but insufficient to effect school improvement
- that practitioners need in-person assistance to define problems, find and interpret relevant research, and act upon it

Sieber's study of the Pilot State Dissemination Program -- a kind of prototype for the State Dissemination Capacity Building Program -- tends to confirm that in-person assistance to practitioners can sharply increase rates of research utilization. Sieber also reported that recipients of this assistance found it quite helpful in solving their problems. The recent Abt Associates' study of the Research and Development Utilization Program -- discussed in Chapter 5 -- supports the claim that sustained, in-depth assistance by linking agents can produce impressive results.⁵⁰

It should also be noted that Sieber regarded the Pilot State Program as a test of certain assumptions which were not necessarily held by the framers of the program. That is, Sieber believed that successful dissemination required a combination of three elements: (a) information for the "rational man" in practitioners, (b) interpersonal assistance to reduce resistance owing to insecurity and evoke cooperativeness, and (c) the exercise of power. At first, he was skeptical about the Pilot State program because it appeared to fulfill the first two requirements but to neglect the crucial third. He observed, however, that the Pilot State field agents more or less instinctively recognized the need for power exercised in support of their work and manipulated local power structures to secure this supporting power.

Assumptions Regarding System for Supplying Missing Conditions

- that many if not most states are already committed to promoting research utilization through dissemination and have begun to develop dissemination systems; therefore by providing very modest funding, NIE can persuade SEAs to help achieve the Institute's goal of promoting research

utilization; subsequently SEAs will use their own and other federal dollars for this purpose (leverage assumption)

- that SEAs are logical choices to provide dissemination assistance to local educators for two additional reasons: they are few in number, thus simplifying matters administratively, and they are constitutionally responsible for education
- that SEA leadership will accord dissemination a sufficiently high priority to support efforts to integrate separate activities into a unified system, overcoming any resistance which individual program managers may offer
- that giving SEAs great latitude to develop their own systems -- not prescribing policies, structures, or modes of operation on the basis of prior research (e.g., Sieber's evaluation of the Pilot-State Dissemination Program) -- is likely to result in the most effective state-level dissemination systems
- that SEAs know how to develop their own dissemination capabilities and therefore require only the opportunity afforded by modest free resources -- not technical assistance or training
- that SEAs have or can recruit and retain people with the talents and skills necessary to operate effective programs of assistance to local educators in using research to improve practice

The State Dissemination Capacity Building Program's solution to the macro problem was to delegate it to the states. To persuade SEAs to take the problem on, SCBP offered "seed money" grants. Actually, in this case "magnet money" might be a better term. NIE had a big mandate (take the lead in improving education by getting R&D into practice) and small resources (a slim budget and no real authority). Hence, the "magnet money" strategy: SDBP hoped its grants would attract state resources (dollars and authority) and state-administered federal resources to the dissemination cause.

To federal officials with a large mission and small dollars, the sirens of "capacity building" sing with special sweetness. The threat of answering to the Congress -- something which federal officials do far more often in their fantasies and their nightmares than in actuality -- commonly engenders a feeling of obligation to serve all parts of the nation. "Building the capacity" of the states to carry out a function appears to ensure broader coverage than a federal agency could offer with its own dollars. It also lets federal officials take action without offending the states.

For a "magnet money" strategy to work, however, SEAs had to be leaning or already proceeding in the direction of reconceiving themselves as client-responsive, process-oriented providers of service to local school districts. To SCBP officials, in touch with a number of lively people from "progressive" SEAs, there appeared to be a trend in this direction. And in some measure, the trend was real. There was in fact an interstate network of energetic, talented SEA people committed to educational improvement through dissemination.

These mid-level dissemination entrepreneurs sought to convince their agency leaders of dissemination's value and to improve communication and coordination across units. They were salespeople for the dissemination mission. The pull of NIE's "magnet money" was amplified by their commitment and energy.

But only some of these people had or were able to gain the support of top agency leadership. And in many agencies, there was neither understanding and interest from the leadership nor committed entrepreneurial talent among the mid-ranks. Nevertheless, some of these SEAs applied and received SCBP grants. At the local level, Berman and McLaughlin referred to this sort of behavior as "opportunistic." "Opportunism" is probably too strong a word to apply to these SEAs. They simply applied for funding because applying for federal funds had become part of their repertoire of routine behaviors and because disseminating R&D information seemed like a reasonable thing to do.

Nor does it appear that breakdowns in implementation or pro forma implementation were commonplace among maintenance agencies that received grants. Rather, implementation was partial. In The NETWORK study's sample, the projects tended to be located in SEA libraries or media centers, where a core "information base" already existed and where husbanding and providing information were valued functions. In the most active of these projects, full or part time information specialists reported that they responded to numerous requests from intermediate agency and local district personnel as well as from colleagues within the SEA. It was as though the first phase of Clemens' vision -- a modest pilot operation within the SEA -- had been realized, but mistaken for the full vision. It may be that intermediate agency and district central office personnel in these states have assumed the field agent role at their own initiative. But we have no information on this point.

In all, it appears that the original vision behind the Pilot State and State Capacity Building programs has been fully realized in relatively few SEAs (one or at most two of the ten states in our sample). Another group of states, equally small, has integrated the dissemination function into their active, problem-focused school improvement initiatives. But in the majority of our sample -- six or seven, depending on how generous one wants to be -- SCBP has at best produced modest increases in the information base at the disposal of the SEA, along with a capability to provide search

and retrieval services by a small number of information specialists. Thus, a handful of SEAs have developed systems for providing information and meaningful assistance, but the majority appear to have made only first steps in this direction.

Charles Mojkowski, a participant in the Interstate Project on Dissemination and a consultant to many Capacity Building projects through the technical assistance portion of the NTS contract, reports that his own up-close observations of many projects tend to corroborate The NETWORK's findings.⁵¹ Mojkowski adds that as NIE funding of state projects comes to a close, most of the projects he knows about are "disappearing without a trace." That is, not only are the distinct SCBP units being disbanded, but the linkage and coordination capabilities are decaying, as well.

All of this casts serious doubt upon the general validity of most of SCBP's macro-level assumptions, including the notions that most states are intrinsically committed to dissemination, that most Chiefs accord the function sufficiently high priority to support coordination of existing activities into an integrated system, and that therefore SEAs need only some marginal additional funding to enhance their dissemination capabilities. The assumption that SEAs need little or no technical assistance to develop their capabilities is especially ironic in a program emphasizing the importance of in-person assistance. On the other hand, it is unlikely that in-person assistance would have improved the effectiveness of the program very much unless a principal focus of such assistance has been to show SEA leaders how dissemination can be used to achieve their high priority goals. And only in a minority of states would those goals have corresponded with NIE's aspirations for "comprehensive, generalized dissemination systems."

The Byzantine Interplay of Problems and Solutions in SCBP

The previous section dealt straightforwardly with SCBP's definition of "the dissemination problem." This section deals with the continuing interplay of "problems" and "solutions" within the bureaucracy in a different and more general sense. That is, in the sense implied by my earlier observation that ERIC, developed as a solution to the Media Branch's administrative problem -- to keep track of reports from previously sponsored research and to give readers ready access to reports relevant to proposals under review -- was subsequently pressed into service as a solution to a broader and quite different problem: to make research available to improvement-minded practitioners. In this sense, the interplay of problems and solutions in the Pilot State and State Capacity Building programs is anything but straightforward. To understand the interplay, it is useful first to separate the political dimension from the substantive, to examine each in turn, and then to weave them back together again.

Politically, the Pilot State Program was a solution to Burchinal's budget difficulties. It was calculated to win Chief State School Officers' support for ERIC and for the program of interpersonal dissemination, itself. When NIE was created, Burchinal needed a constituency worse than ever. He tried to mobilize states' support for his NCEC program -- to use the existing solution to a prior problem as the solution to an apparently analogous problem. But this infuriated NIE Director Thomas Glennan, and the maneuver backfired on Burchinal. Glennan killed the Pilot State Program. Yet Burchinal would have the last laugh. His political constituency was far more robust than Glennan had recognized. The SEA lobby helped to unseat Glennan. Then, Burchinal's solution became Glennan's problem. After Glennan resigned, Acting Director Emerson Elliott reversed matters once more by adopting Burchinal's solution as his own solution to the problem of the Chiefs' hostility to the Institute. He revived the SEA relationship by launching the State Dissemination Capacity Building Program.

Substantively, things were a little less complicated. In one respect, the interpersonal assistance component of the Pilot State Program represented a way of salvaging the ERIC strategy by reconstruing ERIC as a base from which to provide active, personalized help to practitioners -- as a partial if insufficient solution to the problem of getting research into practice. That is, rather than wiping the slate clean and beginning all over again, NCEC officials' definition of the dissemination problem and their search for a solution assumed the continued existence of ERIC. So interpersonal assistance was a solution to ERIC's failure to affect practice very broadly, as well as to the fundamental problem of getting research into practice. The decision was to extend ERIC and similar information bases to practitioners -- to fund "extension agents." The gradual shift from reliance on research results to reliance on assistance as a way of improving practice -- a qualitative transformation accomplished through many small steps, like a new species of animal emerging -- was well under way, if imperceptibly so to people directly involved.

As suggested earlier, however, a "pure" test of the interpersonal assistance strategy was not attractive politically. Rather than funding pilot projects solely on the basis of their qualifications to provide interpersonal assistance, NCEC officials factored in the power of SEAs to support their cause in the Congress. Also considered were the "resources" which Clemens perceived SEAs to have, including power to use important sanctions and incentives to overcome "obstacles to change" in local school districts (e.g., diffusely formulated goals, inadequate capability to act upon new knowledge, limited scientific tradition, and distribution of authority among many centers of power).

Summing up, to all of these intermingled political and substantive problems combined, the solution seemed to be an SEA-based program to extend research information to practitioners through interpersonal assistance. It may have appeared at the time that

the solution could maximize attainment of all the political and substantive goals. But as subsequent events have shown, NCEC and NIE were really accepting a lower level of attainment on the substantive goal in an attempt to achieve the political goal -- survival.

501

109

131

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51. Telephone interview with Charles Mojkowski, September 1981.

CHAPTER FOUR: THE LOCAL PROBLEM SOLVING GROUP

As related in Chapter Three, in 1972 ERIC and the Pilot State Dissemination Program ran into a crossfire of criticism from the leaders of the new National Institute of Education and their advisors. The sources of skepticism about ERIC and the Pilot State Program were various, but one major source was the idea that schools' and school districts' capabilities to address their own problems -- not the dissemination of education R&D results -- were the keys to education improvement. The chief early advocate of this idea was Marc S. Tucker, a member of the NIE Planning Unit who subsequently became an influential staff member in the early days of the Institute. Early in 1973, soon after Director Thomas Glennan decided to scrap the Pilot State Dissemination Program and to restrict ERIC's budget, he asked Tucker to head a group whose charge included further analysis of "the dissemination problem."

The Task Force on Resources Planning and Analysis consisted of a "blue-ribbon group" of people thought expert in various aspects of educational research, development, and change processes, assisted by a small group of NIE staff members. The staff consulted not only with members of the Task Force, but with a broad array of practitioners, researchers, and analysts of federal educational policy.

In December of 1973, Glennan issued the Task Force's report, Building Capacity for Renewal and Reform. The report questioned the power of R&D to solve educational problems:

Given the decentralization and local autonomy that characterize education, the degree to which it is subject to highly localized influences and constraints, and its non-technological craft character, the primary source of energy for reform and renewal must be found in the operating system and in the lay community served by that system. Research and development can be a very important resource for change and improvement, but not the prime mover.¹

Because some members of the task force staff held a more traditional view of dissemination, while others, recruited by Tucker himself, shared his views, different subsections of the report reflected different points of view. For example, a chapter on "Building the Linkage and Support System" recommended three strategies: (1) building upon ERIC, (2) providing appropriately formatted consumer information on the evidence of new products' effectiveness and on how to adopt and implement them, and (3) improving product delivery. This is clearly from a traditional dissemination perspective.

But the local problem-solving perspective predominated.* A chapter entitled "Building Capacity in the Operating System" called for experimental efforts to help schools and districts "develop the capacity to be more analytic in their behavior, more sophisticated in the choice and use of resources (those generated by the R&D community as well as others), and better able to assess critically the effectiveness of what they are doing. We call this set of skills 'problem-solving behavior'."²

Thus, the task force which the director had set up to study the dissemination problem came back to the director with a report which said the whole idea that R&D could be "the principal engine of change and improvement in education" was "a form of myopia that has marked the R&D establishment for some time."

The Local Problem Solving portions of the report said, in effect, that the diagnosis upon which the Institute was based was wrong. The Institute was based on the notion that educational research and development had failed to improve practice because the quality of the research was poor. A new agency was needed to attract "better people" or even "best minds" to educational research. These "best minds" would succeed where second-rate minds had failed. They would produce better solutions to educational problems.

The Local Problem Solving thesis held that previous research might be pedestrian and while better people could produce better research, better research still wouldn't solve the problem. Research and development could provide some resources for improvement, but R&D couldn't be the "principal engine" of change. In fact, there was no single great engine of change, but many little motors -- many separate schools and districts. Improvement in education depended on these districts' and schools' organizational capabilities for solving their own problems, and on the incentives that moved them to do so.

If this were true, the federal government was left with two basic options. Conservatively, the government could simply accept the current level of organizational incentives and capacities in the nation's schools as an institutional limit upon its ability to affect the quality and equality of American education. If school districts and schools already had good incentives and capabilities for improvement, this option would have presented no real problem, political or substantive. In fact, under such conditions, better research by better minds could be expected to produce better practice if the research were only disseminated properly. But the task force did not think good incentives and capacity for problem

*Some have argued that the actual report (i.e., Building Capacity) was a relatively balanced portrayal of the competing perspectives of dissemination but that the interpretation of the report by the LPS Group ultimately reflected the local problem-solving perspective.

solving were very common. So as the title of the task force report implied, the task force inclined toward a second option -- Building Capacity for Renewal and Reform. The government should adopt policies and undertake programs designed to enhance local capabilities for improvement. As might be expected in a research agency, however, the task force recommended a variant on this second option -- try it out on an experimental basis.

Director Thomas Glennan and Deputy Director Emerson Elliott were intrigued by this challenge. In fact, Glennan considered putting Tucker in charge of the entire dissemination unit for the Institute. Because he saw Tucker as too inexperienced in management and in government operations, however, he decided instead to ask Tucker to put together a smaller unit to pursue the notions advanced in the Building Capacity report.³ On the basis of his experience with task force members with a traditional view of dissemination, Tucker argued that the local problem-solving perspective could be developed to its full potential only if he had autonomy from the dissemination program. Accordingly, in the Spring of 1974 the Local Problem Solving Program was set up as a separate organizational unit.

Over the next two years, the unit undertook two major projects designed to explore ideas put forward in Building Capacity. One consisted of grants to a variety of organizations and agencies to help urban schools develop better problem-solving capabilities, together with a contract to study the assistance groups at work. The other was a contract designed to enable "teachers' centers" that had sprung up around the country to communicate better with each other and to help new centers get started.

The Urban Sites/Documentation and Technical Assistance Project

Not long after it was established, the Local Problem Solving unit (LPS) issued an announcement calling for proposals to help urban schools serving low income students to solve the schools' problems. In providing background to prospective offerors, the grants announcement argued that many federal reform efforts -- including the provision of categorical aid to local districts as well as support for research and development -- had failed because they had devoted "insufficient attention . . . to the development of local organizational capacities to sustain a process of school improvement."⁴ To make categorical aid and R&D effective, a complementary approach emphasizing the development of local capacities was required. The LPS program was designed to determine how problem-solving capacities could be developed in local schools and districts.

Actually, the program had two parts. First LPS would make a set of grants to groups and agencies already engaged in supporting sustained improvement efforts in urban schools. The grants would enable these groups to refine and extend their work and would buy NIE access for the second part of the program -- a contract to

study the work of the assistance-providing groups and to use the results to help a second wave of schools, thus disseminating the Study's findings.

The grants announcement for the first part mentioned four types of "organizational arrangements" thought promising:

- "Organizations which foster the teacher's role as innovator and initiator of change." Included here were teachers' centers, advisories, and other organizations that further teachers' professional development by introducing them to new ideas, helping them adapt and use new techniques and materials, providing a supportive environment, and helping them carry out research and development of their own.
- "Organizational strategies which permit a principal and teachers to continually identify and address major problems in their school." Suggested here were mechanisms for student and parent participation in decision-making, as well as scheduling and staffing arrangements designed to encourage and facilitate cooperative planning.
- "Strengthened capacities at the school district level for problem identification, experimentation, and assessment." Examples here included organization development departments, planning and evaluation offices that serve schools directly, and district level dissemination offices.
- "Mechanisms for the involvement of non-professionals as facilitators of school improvement." These included parent advisory councils, community-wide planning groups, citizen-run information centers, and student advocacy groups. Such mechanisms were perceived to stimulate change, increase available resources, and improve the use of resources.

As might be expected, this broad-gauge, inclusive invitation elicited a large number of proposals from extremely diverse organizations seeking support for an equally diverse array of "organizational strategies." Even the final set of nine funded approaches

varied widely and included collaborative structures involving parents, staff, and students; development of mini-schools, alternative schools, and 'open-corridors'; teacher centers; organization development; faculty involvement in governance and peer support; management by objectives; and training for staff and parents to reduce school-community "discontinuity." All thus represented fairly comprehensive change efforts, going far beyond the adoption of specific instructional innovations.⁵

The diversity of the funded approaches reflected the diffuse thinking of LPS officials at this formative stage in the program's development, a diffuseness which officials readily conceded. According to one key figure in LPS, program officials were "responding to [Charles] Silberman's characterization of schools as 'mindless'."⁶ They were searching for ways to make schools more thoughtful, more reflective about their problems and ways of addressing them.

LPS hoped to further develop and crystallize this emergent thinking through a contract to "document and analyze" work at the urban sites. The contractor was to study the work of the assistance groups, derive some "lessons" about building problem-solving capacity from the study, and experiment with combinations of materials and in-person assistance to help other schools try similar ways of improving their capacity.

An elaborate process was used to select a contractor, including an initial qualifying competition, a second round in which competitors submitted more specific and detailed proposals, in-person interviews of the several semi-finalists by representatives from the schools and assistance groups, and a final in-person session with LPS officials. At the end of this painstaking process in December of 1974, LPS selected a joint proposal submitted by two of the semi-finalists, a small Chicago firm of young social scientists and school reformers (the Center for New Schools) and a West Coast university-based center with an organizational development specialty (the University of Oregon's Center for Educational Policy and Management). With considerable excitement and a firm intention on the contractor's as well as LPS's part to develop the strong collaborative relationship necessary to support five years of intensive efforts to work out a major new federal approach to school improvement, the study began early in 1975.

Despite the great care taken to select a contractor, and despite the initial excitement and good will, the project virtually collapsed at the end of two years. During a third year, a dramatically reduced plan of work designed to salvage some learnings from the experience of the funded sites and of the study itself was carried out.

Ironically, the reasons for the collapse of the enterprise had a great deal to do with the organizational structure, culture, and processes of the two groups performing the work, and with a rapidly deteriorating relationship between the performers and LPS. As the discussion which follows will demonstrate, however, the central mission of the project -- to define and describe "organizational capacity for problem solving" in concrete terms -- may well have proved fatal even without these difficulties.

Although some reports on aspects of the Urban Sites/Documentation and Technical Assistance (US/DTA) program have been published and given modest circulation, no comprehensive, third-party evaluation of the program and of the LPS ideas which it embodied has been completed. Thus, less hard empirical evidence exists concerning what happened when the LPS ideas were put into practice than exists for the programs discussed previously. Therefore, the discussion which follows relies largely upon observations I made while a member of the LPS staff and upon reflective analysis of ideas expressed in program documents and in conversations with program officials.

Organizational Climate and Organizational Problem Solving

Several key LPS officials had worked in and around large urban schools serving minority populations, and this experience strongly influenced their thinking. They recall rather vividly schools in which the tensions between students and teachers (particularly white teachers) ran so high as to make instruction virtually impossible. Tensions between the schools and the communities they were supposed to serve were similarly high. As a result, rates of truancy among students, absenteeism or psychological withdrawal among teachers, teacher turnover, and vandalism were high. The fear of violence, if not the actuality, was pervasive. Delivering research on instructional practices or even relevant, ready-to-use R&D products embodying new practices seemed a weak or even inappropriate way to intervene in these schools. It seemed crucial to find some way to improve the overall climate first -- to build more cohesive, mutually supporting relationships among teachers, students, and parents. Given some basic security and stability, teachers could focus on instruction. But without basic order and decent relationships, efforts at instructional improvement seemed doomed by their irrelevance to the "gut issues" dominating teachers' and students' lives.

So this was one sense in which school improvement was perceived to require an organizational focus. This perception led in turn to a second sense in which organizational intervention appeared to be required. While schools did have an organizational structure and administrative mechanisms which provided for the delivery of instructional services, they seemed to lack effective mechanisms for "surfacing" problems that transcend individual classrooms. Schools seemed to be honeycombs of isolated classrooms, within each of which the teacher went about instruction. There was generally no effective forum that permitted teachers and administrators to share problems, discuss possible solutions, and take joint action. And while individual teachers might have conferences with individual parents about student problems, scarce indeed were occasions for the kind of organization-wide or sub-unit-wide exchange necessary to improve teacher-parent relations on a broad front -- in fact, to improve school-community relations.

Although it was not clearly recognized at the time, a major difference between LPS and dissemination advocates was a difference between their images of the problems that needed solving in schools, or at least the priorities they placed on problems of different types. Without saying so very explicitly, most dissemination advocates seemed to assume that the priority problems were problems of curriculum and instructional practice. For LPS officials, the immediate problems had more to do with organizational climate, human relations, and school-community relations. They believed that satisfactory resolution of these problems was a necessary step toward solving the instructional and student achievement problems.

Having ventured this contrast, it is important to concede that it does oversimplify matters. Dissemination programs such as ERIC and the Pilot State Program certainly have served school district administrators, principals, and others with a trans-classroom scope of responsibility. And LPS staff did see change in instructional practice as important. In fact, problem-solving capacity was conceived to include an ability to recognize, articulate, and focus on problems at the instructional level, to invent or choose appropriate new practices, to make necessary adaptations, and through sustained efforts, to implement the new practices effectively. That is, problem-solving capacity was construed to be instrumental to effective change in instructional practice.

Finding a Language: the Baggage of Connotations

Early in the development of their ideas, LPS officials had no language to express clearly the conviction that schools had to be made more thoughtful, more reflective. Within some organizations it might have sufficed simply to express the conviction in just these terms. But this was the world of federal policy -- not just federal policy, but federal research policy. More scientific terms and more crystalline conceptualizations were the medium of intellectual exchange. The language that most closely approximated the diffuse notions which were emerging in the thinking of LPS staff members was the language of organizational development or organizational systems theory, the language of the problem-solving cycle.

This language served LPS officials well in some respects. It did help to lend form and definition to inchoate ideas. But it also carried with it unintended connotations. It suggested that schools should become not simply more rational (thoughtful), but more rationalistic. That is, that schools should use a sharply defined, step-wise sequence leading from problem identification through problem prioritization, problem analysis, search for alternative solutions, selection of the optimal solution, implementation, evaluation, and recycling.

LPS staff believed that such rationalistic behavior was foreign to the culture of schools and most other organizations. Nor did they accept rationalistic problem solving as the unachievable ideal towards which schools should nevertheless strive. They believed that good organizational problem solving was likely to involve a good deal of muddling through, of trying out ideas in order to learn, of redefining the problem as implementation of a solution progressed, of unexpected insights and unexpected obstacles -- a generally messier, less cleanly segmented, and more continuous process than that depicted in the common "problem-solving cycle." But these were difficult perceptions to articulate -- more intimations or mute intuitions than perceptions, in fact. And so, the approximations of organization development were seized upon, with all of the attendant misunderstandings they produced coming along with the convenience of having some language to express the ideas.

The irony is that a long tradition of research and theory more consistent with some aspects of LPS officials' thinking did exist. In Administrative Behavior,⁷ first published in 1947, Simon advanced the notion that organizations' capacity for rationality was "bounded" by a number of factors, including individuals' cognitive limitations and value orientations. In 1959 Lindblom⁸ challenged the utility of the "rational-comprehensive" method of decision-making commonly urged upon administrators and proposed a method of "successive limited comparisons" -- a "science of muddling through." With Simon,⁹ Cyert,¹⁰ and Cohen and Olsen,¹¹ March had thoroughly debunked the myth of organizational rationalism and had developed a new image of a class of organizations he called "organized anarchies."

This tradition was not entirely foreign to LPS officials. They had encountered the work of March and others through a series of conferences which NIE Science Advisor John Mays had organized to develop an agenda for research on educational organizations. But at the time of Urban Sites/DTA, the Local Problem Solving staff had not fully assimilated these ideas, which pointed to powerful limitations upon organizational meliorism.

Dissemination versus "Natural" Organizational Behavior

LPS rejected the idea that schools could be improved by disseminating research results that point to principles of learning and instruction, or by disseminating packages of materials that translate such principles into specified practices or models consistent with the research. It was thought that schools would not seek out appropriate research or model programs because they were too preoccupied by coping with daily tasks and problems. And their mode of coping was not to articulate problems explicitly and to search broadly and systematically for solutions, but to "muddle through," making do with such materials as lay close at hand.

This may be a plausible argument against passive dissemination strategies -- strategies that require teachers and administrators to seek out new practices that might solve their problems -- but it is not necessarily an argument against more active strategies. Such active strategies might bring to the school help with problem definition and selection of appropriate innovations, training in the use of such innovations, and follow-up assistance in working out difficulties encountered during implementation. While careful problem-definition, weighing alternatives, and concerted efforts to implement innovations may not characterize the "natural" behavior of schools and teachers, there is no reason to believe that local educators are incapable of or averse to such processes if they receive skillful guidance and assistance from a disseminator or technical assistance provider.

"Lessons" versus Exemplary Practice

LPS rejected dissemination of R&D products embodying new instructional practices and materials as an independently effective approach to school improvement. But it embraced as a more promising approach the dissemination of new organizational structures and procedures for problem solving.

So it was not all research and dissemination LPS rejected, but a particular approach to disseminating a particular kind of R&D result.

That is, LPS rejected the stand-alone package as an effective medium of dissemination:

Program staff is skeptical about "kits" and "packages" that purport to encourage and instruct about complex alternatives to present practice. The staff believes that materials emerging from studies of the funded sites will not be generally useful by themselves in helping people in other schools to effectively implement problem-solving procedures. It is an assumption, to be tested, that the experiences of the funded sites will best (and perhaps only) be drawn upon by other schools in the context of long-term, face-to-face technical assistance and support.¹²

LPS also rejected the "promising practice" or "exemplary practice" as the form in which what was learned in one setting could best be made useful in another setting. In a "promising practices" or "exemplary practices" or "model programs" approach, a new set of procedures and supporting materials thought or shown to be effective in one setting are carefully described so that they may be implemented in a new setting. LPS argued that this approach was not only too rigid, but that it would discard important information about how the new organizational practice affected and was affected by the setting in which it was implemented.

For example, suppose the same organizational innovation was attempted in two schools -- establishment of a parent-teacher board empowered to set policy for the school and to monitor performance for consistency with the policy. School A is staffed by teachers personally committed to good relationships and shared power with representatives of the community served by the school. School B is staffed by teachers committed to protect their professional prerogatives. They wish to use all non-instructional time preparing for class presentations, grading papers, and carrying out other duties directly related to instruction.

In School A, the attempt to establish a council is successful, and the goals and policies set by the council are treated as authoritative throughout the school.

In School B, the principal believes that sharing his power with the board would improve the climate and functioning of the school. But his faculty prefer to leave difficult questions of overall policy to him. This leaves them free to concentrate on their own classrooms, and also permits them to attribute responsibility for unpopular decisions to the principal. Resentment about these decisions and complaints about various conditions in the school are expressed in black humor, gossiping and other forms of behavior which release tension but do not affect its sources.

Nor are the principal's tentative overtures to the community met with any enthusiasm for shared decision making. The principal is faced with a paradox. It appears that the only way that he could establish a parent-teacher board would be to do so by fiat. Yet, this sort of decisive exercise of his authority seems inconsistent with his goal -- to share power. So he limps along through a school year of futile attempts to set up more modest problem-solving groups, but these either disintegrate or focus on trivial matters.

Now, in a promising practices approach, the parent-teacher board as it functioned in School A might be designated an effective organizational innovation and packaged for dissemination. Or, if the experience of School B were taken into account, the board might be dismissed on the basis of mixed, equivocal results. The LPS officials found neither of these acceptable. Instead of "promising practices," LPS proposed to disseminate "lessons." By "lesson," LPS staff seems to have meant an understanding of how a certain approach to problem solving worked out in one or a few settings, including an understanding of how contextual factors in the setting affected the efficacy of the approach.

Such an understanding, it was thought, would sensitize a consultant providing help to other schools to factors that might require adjustments in the approach or that might rule out the approach altogether. Because of its sensitivity to context, such a "lesson" was thought to represent a more flexible, adaptable form for transmitting experience than an organizational "promising

practice." A "promising practice" was construed as a plan for problem-solving behavior intended to be run off faithfully in each new context.

Strategies for Problem Solving versus Strategies for Capacity Building

The Urban Sites grants announcement neglected to make a distinction between "organizational strategies for problem solving" and "strategies to build problem-solving capacity."

By the former, I refer to arrangements between schools and other organizational units which help schools solve particular problems. For example, a community mental health center might work with groups of teachers and parents to help them understand each other better, thus helping to heal a rift between a predominantly white faculty and the predominantly black clientele served by the school.

To the degree to which they are effective, such "organizational arrangements for problem solving" do increase problem-solving capacity at the local level. That is, a local school district which includes such arrangements may be thought of as having a greater capability to solve problems than does a similar district in which no such arrangements exist. But the increased capacity resides in the new relationships between the assistance-providing group and the school, not within the school itself. It exists so long as the relationship continues to exist -- or to be subject to reactivation by the school.

In contrast, "strategies to build problem-solving capacity" refers to efforts to develop in the individual school an enduring, independent capability to identify and address a whole range of different problems as they arise. For example, a group of organization development specialists might help a principal set up a management council comprising representative teachers and parents, then teach the council members the procedures and skills necessary to function effectively as a problem-solving group.

In providing examples of existing organizational arrangements "which . . . may help schools and school systems sustain a process of self-improvement," the grants announcement included both types of arrangements without distinguishing adequately between them.

Meanings of "Sustained"

A recurrent term in the grants announcement is "sustained," as in "sustained change" or "to sustain a process of improvement." There are several different senses in which it may be important to sustain something having to do with school improvement:

- * It may be important, having made a change in teaching practice, to sustain or institutionalize it.

- * It may be important to sustain the process of trying to define, understand, and invent solutions to a problem. That is, the problem may require sustained attention. A quick reaction may not be adequate to solve it. It may be too complicated.
- * It may be important to sustain efforts to implement the solution. Unexpected problems may occur. It may be hard to learn to implement well. It may need to be de-bugged.
- * It may be important to sustain a capability to solve problems. The structures, procedures, skills, and norms that make up such a capability need to endure, to continue to exist and function.
- * It may be important to sustain such a capability independently of any outside assistance. That is, the school itself, stripped of any collaborative arrangements with other organizations, may need to sustain its internal capabilities to address problems.

Pitfalls and Paradoxes of Capacity Building

The Urban Sites/DTA project was undertaken because schools were perceived to be unmotivated to address their problems in a thoughtful way. Yet, if schools are insufficiently motivated for sustained, reflective attacks on their problems, it seems still less likely that they will be motivated to "develop problem-solving capacity."

Further, approaches which attempt to develop problem-solving capacity directly (e.g., setting up councils, teaching new procedures for running meetings, presenting the case for broader participation in decision making, increasing work group cohesion by encouraging mutual self-revelation) run the risk of displacing attention from instruction onto organizational processes and the individual personal concerns of organization members. This may be necessary on an interim basis -- in order to remove obstacles to effectiveness and to develop new competencies -- but the danger is that the preoccupation with organizational means and personal concerns will persist and drive out goal-orientation and performance concerns, enhancing only the capacity for task avoidance and creating a long string of interpersonal problems rather than solving problems.

Deep Organizational Change Through Assistance?

The Urban Sites project was also undertaken because dissemination was perceived to be inadequate to effect actual change in practice -- even when print information was supplemented by the services of information specialists as in the Pilot State Dissemination Program. Yet, the Dissemination and Technical Assistance contractor was charged with disseminating "lessons" from the first set of sites to other sites by using some combination of print materials, other media, and in-person assistance.

In other words, a kind of second-order "linkage" was proposed in which new problem-solving processes (e.g., teachers' center staff working with teachers, mental health professionals helping parents and teachers understand each other better) rather than new instructional practices were to be conveyed. In these cases, the strategies were new problem-solving processes.

To complicate matters still further, however, some strategies in themselves were not new problem-solving processes, but interventions to improve problem-solving processes. For example, the Organization Development in Louisville, Kentucky sought not so much to help the schools to solve particular problems as to help the schools develop their capabilities to solve their own problems. In this case, the Documentation and Technical Assistance linkers were to convey neither a new instructional practice nor a new problem-solving process, but a strategy for improving problem-solving processes -- third order linkage, if you will.

It was this third-order type of intervention that was most consistent with the rationales and explanations offered in program documents. I would argue, however, that this is the least promising form of intervention because it seeks to make rather fundamental changes in the schools' governance, structure, and processes with a relatively weak instrument -- assistance.

It appears that making such deep changes in schools as organizations requires the exercise of real political power -- the power to specify changes concretely and to enforce them through sanctions or elicit them through very strong incentives. In the context of a strong external mandate or a strong internal commitment, assistance of an organization development sort may prove helpful; but in the absence of this or some other powerful incentive, attempting to effect major organizational change in schools by providing process assistance is like trying to push a rope.

Problem, Strategy, and Assumptions in the Urban Sites/ Documentation and Technical Assistance Project

As previous chapters have done for the ERIC system and the State Dissemination Capacity Building Program, this section defines and discusses the Urban Sites/DTA project's way of defining the dissemination problem, its strategy for addressing the problem thus defined, and the assumptions underlying the strategy. Once more, "assumption" refers not to a deliberately made or explicitly held premise, but to a proposition which would have to be true if the program were to work. Program framers may or may not have been aware of the assumptions on which the program rested.

Problem

The key problem is schools' lack of organizational capabilities and incentives to define and address problems in a sustained, reflective way.

Strategy

The core strategy is to support diverse approaches to building schools' problem-solving capacity, to study these technical assistance processes, and to use the "lessons" to help other schools develop similar capabilities.

Assumptions Regarding Conditions for Improvement

- that the principal missing condition for school improvement is an organizational capability for problem solving, in the absence of which research, development, and dissemination will prove powerless to effect change
- that the main elements of increased problem-solving capacity are broad participation by practitioners and citizens and use of rational problem-solving processes, including:
 - * opportunities for teachers to take initiative in identifying problems and working out or adapting solutions
 - * opportunities for teachers to discuss and reflect upon problems and potential solutions
 - * leadership by the principal in providing, managing, and sustaining such opportunities
 - * citizen involvement in problem solving and decision making
- that providing opportunities for teachers and citizens to participate in problem solving and decision making will release and channel energies for improvement, thus engendering incentives for schools to attack problems
- that sustained interpersonal assistance is necessary and sufficient to develop such capabilities and stimulate such incentives

Commentary

The argument that improved problem-solving incentives and capabilities in the schools would multiply the effectiveness of federal programs designed to promote school improvement has a kind of intuitive persuasiveness. Many schools really do not appear to offer forums where teachers and parents may express their frustrations and aspirations, or to possess the management skills necessary to transform this dissatisfaction into constructive change efforts.

In the middle seventies, a series of Rand Corporation reports on federal "Change Agent" programs tended to reinforce the intuitive appeal of the local problem-solving perspective.¹³ Berman and McLaughlin found that local factors -- such as the basic

motivation for seeking federal dollars (i.e., to solve real problems or only to bring in slack resources), broad-based participation in planning, training keyed to the emergent needs of those carrying out the project, and local development of materials rather than wholesale adoption of instructional packages -- were the keys to successful implementation. In retrospect, it is not surprising that local factors rather than federal policies and management practices dominated implementation of these programs. In spite of local school districts' and SEAs' complaints about federal regulation, many federal programs were actually quite permissive, requiring only that the dollars be used for certain broad purposes, not that a particular type of instruction or even a particular management approach be used.

Recently, some of the conclusions and interpretations Berman and McLaughlin drew from their data have been called into question.¹⁴ But few would argue that local problem-solving capabilities are not crucial in the change process. More arguable is the proposition that the federal government can and should do much to improve such capabilities. Certainly, the Urban Sites funded by the Local Problem Solving program appear to have had little success in building enduring capacities in client schools. Absent strong internal commitment to change, technical assistance alone -- without powerful incentives or sanctions -- seems a weak instrument with which to make enduring changes in individual schools' organizational behavior.

Assumptions Regarding System for Supplying Missing Conditions

- that many school district central offices, mental health centers, teachers' centers, citizen organizations, organization development specialists in public and private organizations, and other groups and agencies are already working with schools to develop their problem-solving capabilities
- that by describing and analyzing these programs of assistance, a third party social science contractor could assess their effectiveness, isolate the elements which contribute to the program's success, and "determine which program elements are idiosyncratic and which might be adapted to suit other settings"
- that the same contractor can then translate the "lessons" from intervention in the first set of schools into assistance that will help other schools to solve their problems and develop their long-term problem-solving capacities
- that by experimenting with different ways of providing such assistance, including some that supplement in-person help with various combinations of materials and media, the contractor can reduce the costs of assistance sufficiently to make building problem-solving capacity a feasible federal approach to school improvement

- that a large number of agencies and organizations similar to those funded in the experimental-demonstration project are already or could be persuaded to provide similar capacity-building assistance, would draw on lessons and materials developed by the Documentation and Technical Assistance contractor, and could do so effectively
- that the federal government might well fund a major initiative based on these premises to complement categorical aid and support for research, development, and dissemination

Commentary

Several of the macro-level assumptions specified above relate only to the experimental Urban Sites/DTA project itself, not to the major federal initiative to which the Urban Sites/DTA project was intended to contribute knowledge and know-how. The vicissitudes of Urban Sites/DTA have already been outlined. The experiences of the sites and the study contractor obviously call the project-specific assumptions into question. The key point remaining to be made here is that if the assumption that capacity could be installed within individual schools proved false in the experimental project, in carefully chosen cases, then it may be inferred that a greatly expanded technical assistance program would probably just multiply the failures.

Nevertheless, two major pieces of evidence suggest that some ideas from the local problem-solving perspective may not be dismissed lightly. The first piece comes from the Research and Development Utilization Program (treated at length in Chapter 5). RDU consultants led broad-based groups of teachers, administrators, and parents through some version of the problem-solving cycle commonly used in organization development efforts: (1) "needs sensing," (2) problem definition, (3) search for solutions, (4) consideration of alternative solutions, (5) adoption of an innovation, (6) implementation and trouble-shooting, and (7) evaluation of the results. Although the study of RDU confirmed that it is extremely difficult to build and leave behind an enduring organizational capability to articulate and address problems, the problem-solving process employed by RDU assistance-providers does appear to have contributed heavily to the success of particular improvement efforts.

Second, there is the California School Improvement Program (CSIP). CSIP offers powerful incentives for the development of school-level problem-solving capabilities. Receipt of substantial grant funds from CSIP is contingent upon establishment of a school site council, which develops and monitors implementation of a school-wide improvement plan. Periodic reviews by visiting teams from other schools and institutions are intended to assure that the council fulfills its responsibilities. It is within this institutional context of supports and constraints that technical assistance of an organizational development-cum-community organizing sort is offered the schools.

The first major evaluation of CSIP is currently under way. Although the evaluation contractor -- Manifest International of Berkeley -- has issued no formal public reports, on the basis of the first year's data collection, project staff appear impressed by the promise of the program. It may well be that a state education agency -- particularly one in a state unfettered by a prohibitively localist tradition -- can make a lasting difference in schools' structure and culture by coordinating the exercise of power with the provision of technical assistance. Organizational structure, climate, and processes probably are crucial to school improvement efforts, but probably cannot be changed very deeply without coordinated use of incentives and assistance.

The Teachers' Centers Exchange

The second major project which the Local Problem Solving Unit undertook in order to explore ways of helping local educators "reform and renew" their own schools was the Teachers' Centers Exchange. The Exchange was intended to strengthen existing teachers' centers by promoting communication and mutual support among them. And perhaps more importantly, the Exchange was to make the experience of these established centers available to people who were starting new centers across the country. As we shall see, the Exchange embodies two distinct ideas, the idea of the teachers' center as an organization that can support teachers' professional development, and the idea that the informal or "natural" network through which centers support each other and multiply can be strengthened by deliberate intervention.

Origins of the Teachers' Centers Exchange

LPS chief Marc Tucker traces the origins of the Exchange to the late sixties, when he was an assistant to the president of the Education Development Center (EDC) in Newton, Massachusetts. The Education Development Center had grown out of a set of science curriculum development projects funded by the National Science Foundation in the late fifties and early sixties. According to Tucker, EDC cultivated a broad array of contacts with thoughtful, talented teacher educators and teachers. To various degrees and in different ways, these people participated in the development, trial, and refinement of such curricula as the Elementary Science Study. ESS materials emphasized "hands-on," active, exploratory learning experiences for children.

Over time, EDC administrators began to view this emerging network of people as a vehicle for spreading the use of the materials they were developing. As Tucker recalls, the consultants were effective disseminators of EDC materials not because of their organizational positions or any formal authority they commanded -- which frequently was slight -- but because they understood the principles of instruction and learning which underlay the materials, because they used the same principles to help other teachers learn to use the material appropriately, and because this was done through direct, relatively informal, person-to-person

communication. As they recognized the effectiveness of this inadvertently created dissemination network, Tucker says, EDC officials began to cultivate and extend it.

One of the "members" of the network of developers and disseminators who most impressed Tucker was Lillian Webber of the Workshop Center for Open Education at the City College of New York. It seemed to Tucker that Webber combined an intuitive feeling for teaching with a deep knowledge of child development theory and research. She was also familiar with the most recent products of curriculum development. Webber integrated the research and the products of development into her work with teachers, serving continuously as a translator -- or, to use Tucker's metaphor from telecommunications, a "transducer" -- between the world of R&D and the world of practice. This translation was facilitated by a friendly, supportive, and intellectually challenging relationship with the people in her pre-service and in-service programs. As a result, Tucker says, the teachers with whom Webber worked were encouraged and enabled not only to assimilate the results of R&D into their classroom practice but also to make intelligent adaptations of R&D products and even to create original materials and techniques, themselves.

Webber seems to have become for Tucker a kind of symbol or guiding image of what constitutes really good dissemination. One can almost see her image behind the following quotation from Building Capacity.

Finally, a broad range of professional support arrangements is now evolving which links together teachers, principals, students, parents, and the general community to stimulate and provide a setting for problem-solving in the schools. These linking strategies, which include teacher centers, advisories, technical assistance programs, parent advisory groups, and various school based in-service education strategies, view the traditional consumers of R&D . . . as "designers" of educational improvements as well as the recipients of externally developed reforms. In this conception, it is assumed that unless people in the schools possess the capacity to identify and generate solutions for their problems, either through the creative adaptation of R&D products to meet their local needs or through the generation of locally developed initiatives, little in the way of beneficial reform will occur.

The goals of this type of linking activity contrast rather significantly with linking arrangements designed primarily to relate the research community to the schools. The former emphasizes a delivery strategy, although often providing for interaction between the research and practice systems. The latter is based on practitioner desires for self-improvement and provides an organizational base and access to resources for translating these desires into useful forms of assistance.¹⁵

While carrying out the interviews and observations that issued in Building Capacity, Tucker and task force member Mary Harahan talked with several foundation officials who shared their enthusiasm for teachers' centers and who were searching for a way to sustain the centers they had helped to develop but could not fund on a continuing basis. These discussions produced the idea of a kind of "teachers' center self-help coalition." Marjorie Martus of the Ford Foundation suggested that Kathleen Devaney of Far West Regional Educational Laboratory in San Francisco would be a good person to explore the feasibility of putting together such a coalition.

In May of 1974, LPS commissioned Devaney to map existing centers and communication among them while also "assessing possibilities for extending and widening the existing routes and thus creating an alternative network for spreading news of promising new practices in education and putting newcomers in touch with veteran guides."¹⁶ For the next year, Devaney and her associate Lorraine Thorn visited, read about, and reflected on a continually broadening circle of centers -- over forty contacted directly and about as many more learned about by reading or word of mouth.

In May of 1975, Devaney and Thorn published Exploring Teachers' Centers, which described twenty-two centers in some detail and which offered an analysis of centers' characteristics, the network of communications among them, and the prospects for an intervention to strengthen and extend the network.

Although Devaney and Thorn did not say so in so many words, their study had to do with dissemination in two distinct senses. First, there was the idea of the teachers' center as "an alternative form of continuing education for practicing teachers."¹⁷ Through such continuing education, innovative ideas and practices would be disseminated. And second, there was the idea of a communications network through which this new organizational form, the teachers' center, would itself be disseminated.

Speaking first of the centers rather than the network for disseminating them, Devaney and Thorn declare that

After analyzing our interviews we still did not have a proper dictionary definition but we had a spelling: teachers' center. The apostrophe, connoting the possessive, seemed most apt for the set of organizations we had been talking to, because each is a program providing continuing education for practicing teachers...which aims to be responsive to teachers' own definitions of their continuing learning needs rather than to school administrators', college professors' or curriculum committees' imposed agendas. Such a program may be a place where teachers come to work together and receive instruction, or share self-instruction, or it may be a staff of advisors who go out to help teachers in their schools, working in the same spirit of finding

teachers' own starting points for improvement. Thus the widely used term advisory is included within our embracing definition of teachers' center.¹⁸

These centers, Devaney and Thorn wrote, had several additional common characteristics. They offered "fresh" materials and ideas emphasizing active, exploratory, and individualized activities for students. They offered opportunities for teachers to make their own materials and apparatus, and otherwise to involve themselves in "active learning" experiences analogous to those emphasized for children. Instruction and assistance were provided by current and former teachers. Instruction and assistance were designed to stimulate and support teachers' "growth," not to promote implementation of a particular new instructional model or strategy. And both the basic fact and the particular form of participation by teachers were voluntary.

Underlying all of this, the authors said, was a common philosophical premise:

Teachers must be more than technicians, must continue to be learners. Long-lasting improvement in education will come through inservice programs that identify individual starting points for learning in each teacher; build on teachers' motivation to take more, not less, responsibility for curriculum and instruction decisions in the school and the classroom; and welcome teachers to participate in the design of professional development programs.¹⁹

In talking about both the Exchange and his observations at EDC, Marc Tucker also emphasizes the importance of "shared premises" or "shared values" as sources of both energy and guidance for educational change. One of Tucker's objections to "the whole information science approach" to dissemination was its "failure to recognize the value-based, even political character of change in education."²⁰ The informal network of teachers' centers, like the networks that had formed around EDC's curriculum development projects, were carriers of values as well as of (1) ideas about education, and (2) information about teachers' centers as an organizational form appropriate to the propagation of these ideas.

In Beyond the Stable State, Donald Schon expressed the same notion in a more general form when he said that networks are the "carriers" of social movements. It was this sense of a "social movement" that Tucker had in mind when he said educational change is "value-based, even political."

In this light, Devaney's statement that she was exploring the possibility of "creating an alternative network for spreading news of promising new practices in education" takes on a new meaning.²¹ That is, one might wonder, "Alternative to what?" "Alternative to the bureaucratic networks for dissemination and staff development which are controlled and operated by various

elements of the formal intergovernmental system," seems to be the answer. The formal system is seen as rigid, unresponsive, choking off initiative.

By contrast, among teachers' centers Devaney and Thorn observe "a nationwide, loose but operating hookup that meets Matthew Miles' definition of a 'network' -- that is: 'A dispersed structure permitting low-energy access to trusted competence. Appropriate information, energy and other resources can easily be located from physically dispersed nodes to solve local problems.'"22

The over-all image that emerges from Tucker's reminiscences and from Devaney and Thorn's Exploring is an overlay of two realities. First, a formal intergovernmental system that is hierarchical, well-defined, rectilinear, and constraining. Then, in Charles Kadushin's apt phrase, "draped across" the formal institutional structure is a loose, changing, flexible, responsive, informal interpersonal communication network.²³ The informal network carries new ideas, new values, and mutual support among its members. Its members share certain "premises" about teacher education and share a commitment to teachers' centers as a vehicle for realizing these premises. The network is a social movement whose goal is to make over certain parts of the formal system in its own image.

"Roots"

Having described the visible characteristics and the philosophical underpinnings of teachers' centers, and having described the informal communication network that laced them together, Devaney and Thorn have a little to say about the roots of the teachers' center movement. One source of the movement were the problems confronted by British teachers after "unstreaming," or the creation of comprehensive schools. The authors quote British educator L.C. Taylor concerning these problems:

Teachers previously in grammar (academic) schools find themselves faced with children they once thought to be the invention of dyspeptic novelists: adolescents intractable and sometimes delinquent, profoundly uninterested in the standard repertoire of instruction, unable to read, unmoved by bourgeois ambitions, without hope of passing exams (admitting to higher education), from homes that provide neither support nor control -- and so on. The search for help, advice and comfort becomes urgent

To fill the void, teachers try to make their own individualized or group activity materials. But whereas talking to a class is relatively easy, to write things down in a form children will understand, to clarify obscure points by diagrams or illustrations, to collect suitable readings and concoct practical exercise . . . then to stencil, duplicate, collate, bind . . . all this

takes a lot of time. Teachers hope to share this burden, and to get technical and clerical assistance. Is there some Centre from which help could come?24

Much more vividly and concretely than anyone among the circle of high-level policy analysts who created NIE, Taylor describes precisely the problem that led to the creation of the Institute -- poor and minority students whom neither teachers nor researchers knew how to educate or control. Research policymakers in the U.S. created the NIE. Teachers and teacher educators in both England and the United States created the teachers' center.

Devaney notes that some critics of teachers' centers as a strategy for school improvement say that centers are based on a hopelessly naive assumption. Most teachers, the critics say, are either exhausted by the stress and frustration of teaching or are resigned to punching the clock and mechanically following the curriculum guide. Getting through each day without a screaming headache is the average teacher's goal, they say. Yet, teachers' centers are based on the assumption that teachers want to take initiative for improvement.

Devaney responds:

Given the frequency of the teacher's self-perception of being embattled, powerless, drained, oppressed, or just plain bored, the suggestion that teachers could be the source of extra energy for the improvement of the system might seem laughable. But what if you just nonjudgmentally accept both views of teachers? That they are turned-off, just going through the motions, defeated; and that they are able, committed, interested. What if you recognize that the condition of many teachers is that they feel a need to change but can't get up enough energy because they'd have to change more than themselves.

You might offer a resource for learning which teachers could tap with low expenditure of energy. Matthew Miles' definition of an informal information sharing network ("permits low energy access to trusted competence") suggests that in a low-energy situation the first ingredient must be trust. Thus, you might offer quick, short, trusted learning episodes -- trusted because they are taught by successful classroom teachers, not professors or supervisors, or R&D people. You invite participation, never require it, because you cannot afford to bleed off that little store of energy in resentment or resistance to compulsion. You might offer help that supports rather than exhorts, works alongside rather than supervises. In short, you might start a teachers' center.25

"Strengthening and Extending" the Network

Could the informal social network that linked teachers' centers be "strengthened and extended" -- made more intensive and productive as well as more readily tapped by people interested in forming new centers? And could this be done without destroying the character of the network, its ability to offer "low energy access to trusted information"? Could the network be "networked"?

Many social scientists who studied networks said no. Intervention would inevitably deprive the network of its cherished informality. Devaney and Thorn concluded the social scientists were wrong. If carried off with restraint and adroitness, "networking" would not spoil the network. As Miles later put it, networking was rather "like the aerodynamically unfeasible bumblebee who does in fact routinely fly."

In fact, Devaney wrote, the teachers' center people she had talked with suggested a number of functions that a networking project could usefully perform. The project could put together a directory of centers. It could serve as a "matchmaker" among centers listed in the directory and between these established centers and incipient ones. The project could collect and circulate teacher-made materials for students; likewise for teacher inservice materials and ideas. It could arrange personnel exchanges among centers. And it could put together study groups or problem-solving groups to think about and do research on common problems.

Operations of the Teachers' Centers Exchange (TCE)

Soon after the publication of Exploring, the Local Problem Solving Unit awarded a contract to Far West Laboratory for Educational Research and Development to support Devaney and Thorn in carrying out just such functions. A recent paper of Devaney's²⁷ describes six "structures" or mechanisms which the Exchange has used to enhance the teachers' center network: an information center; publications; personal visits to centers and meetings of center people; a program of "mini-awards," or small grants for such purposes as reimbursing people from novice centers for the costs of travel to experienced centers; small retreats or "workparties," so called because participants work to solve common problems and exchange ideas rather than hearing speeches or lectures; and liaison between network members and foundation officials, government officials, and researchers.

More intriguingly if less concretely, Devaney illuminates the Exchange's style of working by quoting David Hawkins on the subject of "eolithism":

Very early on, the Exchange was influenced by the principle (from anthropology) of "eolithism," which the American engineer and novelist Hans Otto Storm contrasted to the engineering principle of design. Eolithism was

brought to our attention by David Hawkins, founder of one of the first American teachers' centers, who wrote:

An eolith is literally a piece of junk remaining from the stone age, often enough rescued from some ancient buried garbage heap. Storm quotes a definition: "stones, picked up and used by man, and even fashioned a little for his use." The important matter . . . is that eoliths were picked up, already accidentally adapted to some end, and more importantly, strongly suggestive of the end.²⁸

As with stone age people and stones, Devaney suggests, she and her associates have "picked up" a network which was already adapted to the end of enhancing and propagating teachers' centers and have "fashioned it a little" for her own -- and the government's -- use. Continuing the handicraft metaphor, she later notes that her work "is not a matter of delivering information or expertise to clients but rather of weaving relationships among participants who give as well as take."

Expressed simply, this "weaving" generally takes place in two steps. First, when a newcomer to the Exchange gets in touch by phone or in writing, a TCE staff member tries to respond in a "counseling style," helping the inquirer to clarify his or her situation and needs, and to identify resources which lie close at hand but have not been recognized as such. TCE also makes suggestions and -- perhaps most importantly -- tries to put the inquirer in touch with a readily accessible network member. In a sizable minority of cases, this interactive, counseling style of response seems inappropriate, and TCE makes a straightforward "clearinghouse-style" response, providing the inquirer with a piece of information or a publication.

The counseling style is strongly preferred, however, because it is thought most likely to lead to the second step in the "weaving" process -- a visit to another teachers' center, participation in a "workparty," a long telephone conversation with someone from an established center, an exchange of correspondence, or some other form of direct interaction with another network member.

Step one might be thought of as an exchange between the "center" of the network and a person on its periphery; step two is an exchange around the periphery. TCE staff resist this formulation because they insist that the network has no center, and even if it did, TCE would not be it. But for some purposes the center-periphery versus around-the-network distinction is very useful. For example, it permits the perception that moving from step one to step two multiplies available resources greatly. To provide everybody who wants help with direct technical assistance would be prohibitively expensive. But by putting inquirers in touch with established network members, the Exchange can broker help far more broadly.

In both types of interactions, Devaney says, more is imparted or exchanged than ideas and techniques. "The content of the network is also affect -- encouragement, reassurance, commiseration, understanding of problems, recognition that there are people in distant places who share similar beliefs, stresses, and satisfactions," she writes.²⁹ Later she adds, "Because professional relationships intertwine with personal relationships, if you want to foster the former you must pay attention to the latter. When people are feeling strange, unappreciated, lonely, or under pressure, they are vulnerable to feeling alienated and inadequate, so it is difficult for them to learn, to communicate, to contribute."³⁰

The Teachers' Center Exchange and the USOE Teacher Center Program

The Education Amendments of 1976, signed into law in the Fall of that year, authorized up to \$68 million a year for a program of federally supported teacher centers. The story of the relationship of the Teachers' Centers Exchange to this new program, administered by the U.S. Office of Education, reveals a good deal about the TCE's fundamental assumptions concerning the relationship between centers and the formal intergovernmental system of education.

For some time before the authorizing legislation was actually passed, LPS officials had been following its development and attempting with small success to influence its provisions. These attempts at influence were both direct, in the form of discussions between Mary Harahan of LPS and Allen Schmieder of USOE, and indirect -- through contacts between Harahan and officials of the National Education Association and the American Federation of Teachers.

Before regulations were written or funds were awarded by the new program, LPS made two additional attempts to influence its effects. First LPS awarded grants to the NEA and the AFT to provide "technical assistance" to funded centers. Since no centers had yet been funded, the two teacher organizations had time to prepare themselves for this job. During the preparatory period, LPS tried to ensure that officials of the organizations were exposed to the Exchange, to the experienced centers in the Exchange network, and to leaders in the English teachers' center movement. According to one LPS staff member, this strategy was more effective with the NEA than with the AFT, although the AFT teachers' center people were at least well-informed regarding the history of the teachers' center movement if not deeply influenced by what some regarded as the elitist, even precious character of many TCE centers.³¹

The second action LPS and the Exchange made to influence the USOE program after passage of the legislation was to encourage network members to speak up during the regulation writing and review process. As part of this advocacy effort, the Exchange published the first in an occasional paper series, entitled "Surveying

Teachers' Centers -- from Grassroots Beginnings to the Possibility of Federal Support." The paper was intended to "trace origins and identify colloquial meanings attached to the term teacher center, lest its root, sense, and feeling be uncomprehended in the clamor for federal funds."³²

After characterizing and explaining the rationale for the kinds of centers associated with the Exchange, the paper turned to a discussion of the opportunities and perils presented by the new law:

The major issue is: how can the teacher-involving, teacher-supporting, teacher-stretching centers relate to the local education agency and yet keep their integrity?

A teachers' center staff that's outside the district can build up a high trust level with teachers, but the staff's influence within the system is the crux of how well most teachers can perform back in the classroom. The teachers' center has to be more than a place to come and get turned on by innovative materials. It must have some mechanisms for reaching the structure and policies of the school system.

Collaboration with the school district means devising decision-making structures which are mutual but which preserve the program's independence and thus the credibility of the teachers' center staff with rank-and-file teachers. Joint policy making and the search for stronger incentives for teachers to participate will entail initiating or strengthening relationships with principals and other supervisory and planning staff in the district, and encouraging them to use the center as a resource for district-sponsored improvement projects. However, such collaboration cannot be at the risk of destroying the center's status as a place where it's safe for teachers to admit inadequacy and to experiment without fear of being evaluated.³³

The teachers' center seeks to change the nature of staff development, and ultimately, the nature of instruction in public schools. To do so, it must form close relationships with school districts. Yet by doing so, the teachers' center runs the risk of being changed, itself, rather than being the change agent. It risks transformation into a part of the bureaucracy that it is trying to transform. With the emergence of the USOE Teachers' Center program, existing centers were attracted by relationships with school districts for another reason -- because only districts could apply for federal funds. Centers are nearly always financially marginal, so the prospect of federal funding (or better yet, of initial funding by USOE followed by long term funding by the local district) was enormously appealing.

And this quandary for the individual center was reproduced at the level of the Exchange and the movement it represents. That is, the Exchange and its network of centers seek to reform staff development, and through staff development to reform instruction in the formal educational system. The USOE centers program presented an opportunity to acquire or capture a level of resources that were previously only dreamed of. In fact, the creation of the OE program also represented an opportunity to try out "local problem solving" ideas on a large scale -- perhaps eventually on a huge scale. It was exactly this kind of opportunity to make a major new departure in federal education policy which Tucker had hoped for when the Local Problem Solving Program was established. At the same time, for both LPS and the Exchange, the danger was that beliefs or features of the teachers' center movement might be compromised by the engagement with the USOE program. Thus, for the Exchange and for the LPS, a relationship with the USOE program and the teachers' union that supported it represented a crisis in the Chinese sense -- a dangerous opportunity.

The ambivalence which accompanied this sense of dangerous opportunity is reflected in Devaney's cautionary discussion of four aspects of the coming OE centers: governance, incentives for teacher participation, needs assessment, and the scale of the centers and pace of their development. Concerning governance, Devaney diplomatically warned that teacher-dominated boards will not necessarily ensure wise policies. It is important, she wrote, to involve teachers who have an investment in good and responsive inservice education which antedates the new funding opportunity. She suggested that it is also important that the board be granted a voice in making curriculum and instruction policies for the district as a whole.

Regarding incentives, Devaney noted that "almost every discussion of teachers' centers as a model for federally supported inservice evokes a challenge as to what a center can do about 'all those others': rank and file teachers whom the challenger characterizes as unwilling to improve." She questioned the tacit assumption that teachers' centers are only good for an elite of highly motivated teachers and that the great mass of teachers are unstirred by any intrinsic desire for improvement. But she did concede that certain incentives would help broaden the appeal of participation in teachers' center activities. These include a clear message from the top of the district that participation is valued, a central role for teachers in the design and conduct of center activities, isolation of center activities from the process of teacher evaluation, salary increments and recertification credits for center workshops and other activities, and paid released time for participation.

Turning to needs assessment, Devaney rejected "comprehensive, technologically sophisticated needs assessment questionnaires" as the best way to determine what teachers need. Instead, she recommended an individualized approach involving sustained

discussions between teachers and center staff and entailing a heavy reliance on the teacher's own judgment of his or her strengths and needs. Without saying so explicitly, Devaney was thereby opposing imposition of district-wide priorities upon centers' offerings or the use of centers as vehicles for training complements of teachers in innovations adopted by a district's central administration.

Finally, concerning scale and pace, Devaney urged policies that favor starting small and growing slowly -- what she called a "snowball" as opposed to an "avalanche" strategy. She says a small staff developing slowly are able to shape the program around what the clientele wants and around locally available resources.

Initially, at least, neither LPS officials' overtures nor Devaney's arguments appear to have moved USOE and the unions, for whom the issue of governance remained central. USOE apparently saw a formalized governance structure involving district administrators as well as teachers as a way of ensuring the centers' long-term viability. Support from the unions was also doubtless seen as insurance for the USOE program's own long-term survival and budgetary prosperity. One program official explained that "there's a difference between getting on with your thing and working with groups with other agendas. I think there are greater long-term possibilities with the second approach."³⁴

In addition to the priority given to governance by USOE and the unions, members of the Exchange network were also distressed by what they saw as the slight attention to program quality and experience reflected in proposal evaluation criteria; by the requirement that centers be formally linked to local school districts, jeopardizing centers' independence; and by the omission of any provision for experienced centers to give technical assistance to new centers.³⁵ The difference of emphasis between the Exchange network's centers and the USOE was reflected in the pattern of grants awarded. According to a major formative evaluation study of the Exchange, "Very few members of the Exchange network were among the first 61 centers to be funded in August, 1978."³⁶ And over the life of the program to date, only a handful of centers associated with the Exchange have been funded.

Despite the rebuffs, the Exchange decided to offer its services to the USOE-funded centers. And, as mentioned earlier, the Exchange sought to cultivate relationships with the AFT and NEA people responsible for providing technical assistance to these centers. The result, apparently, was a substantial infusion of the Exchange network's viewpoints and experience into the USOE centers -- a degree of influence which fell short of LPS' and the Exchange's aspirations, but which was certainly significant.

The advent of the Reagan administration, which views the USOE centers as "government-funded union halls" and which has moved to eliminate the teacher center program by consolidating it with about twenty other programs into a single block grant to SEAs, has

brought a disorienting reversal to this line of development. The fact that it is not directly and intimately tied up with the USOE program may actually be an advantage for the Exchange -- if the new Director of NIE recognizes that the Exchange antedated the USOE program and that the Exchange never embraced the unions' position on the governance issue. It would be ironic indeed if the distinction between the Exchange and the USOE program failed to register and the Exchange were identified with the unions it could never quite win over.

Summing Up, Formatively

What has the Exchange accomplished through all of this networking and politicking? Devaney has her own answer:

After five years of operation of the Teachers' Centers Exchange, it is clear that a small, naturally formed network of leaders in the first American teachers' centers has grown tenfold in numbers; that critical characteristics of the original practice have been preserved in old centers and adopted by new centers; that several disparate theoretic and programmatic thrusts for reform of conventional inservice have merged into a wider, more coherent concept for practitioner-responsive-and-initiated staff development; and that network participants communicate easily and frequently, about substantive professional issues, with others in the network as well as with the Exchange.³⁷

(Although it is not the main point of the present discussion, it is worth pointing out that here Devaney speaks approvingly of preserving "critical characteristics of the original practice." Many in the teachers' center movement, including Devaney, have criticized dissemination programs that seek to "replicate" an innovation in many adopting settings. Of course, in these cases "the innovation" is generally a classroom practice rather than an organizational form. Without doubt, there are other important distinctions to be made which could reconcile the two apparently contradictory positions.)

In support of her self-evaluation, Devaney cites "Reflections on the Teachers' Centers Exchange," the report of a team of three consultants commissioned by the Exchange to gather feedback on the project's work. The three are Eleanor Duckworth of MIT, formerly a colleague of and translator for Jean Piaget; Victoria Steinitz, a social psychologist on the faculty of the University of Massachusetts at Boston; and Neil Sutherland, an historian from the University of British Columbia. Between June 1979 and August 1980, the team interviewed network members concerning their perceptions of the Exchange and examined the historical and political context within which the Exchange arose and developed.

Early in their report, Duckworth, Steinitz, and Sutherland disavow the premise that evaluation can be neutral or "value-free" and declare their sympathy for the Exchange's goals and general orientation. They note, however, that none of the three has previously been associated in any way with the Exchange, and they stress that they were asked to focus especially on criticisms or complaints which network members might be reluctant to voice directly to Exchange staff members. Accordingly, they say, they have "highlighted" criticisms -- "Sometimes, in fact, a single negative comment is cited, even if it represents no others in our sample."³⁸

Whatever the effects of a positive predisposition toward the TCE combined with a solicited stress on criticisms may have been, "Reflections on the Teacher's Center Exchange" is overwhelmingly positive in tone. The central section of the report deals in turn with seven aspects of the Exchange: the quality of the staff, networking, mini-awards, workparties, research awards, publications, and advocacy and liaison with external organizations. Each section combines some summary observations with extensive direct quotation from the interviews.

Here is a synopsis of each section, with selected quotations.

• Quality of the Staff

The consultants say that there is nearly universal agreement that the staff are competent, committed, and talented.

They've done a great job over the years of listening to me, both when I thought teachers' centers were terrific, and when I thought they weren't going anywhere . . . I don't think I would have stuck with it as long as I have without them. Without their support, I'd have quit.

• Networking

By "networking," the report refers to TCE's work in weaving together people and strands in the existing network with newcomers to the teachers' centers movement. According to a TCE self-description, this is mostly a matter of putting like-minded people in touch with each other "so that inquirers receive answers from people whose practicality they can rely on and whose setting and concerns are to some degree comparable with their own." "Reflections" points up a number of themes in this area, and provides supporting quotes:

Range and Depth

[Staff] is enormously good at hooking people up. She's most effective at introducing people. She's gotten better at it over the years. She almost always finds an entry point. It has to do with the quality of her listening and being able to hear the important issues and

connections. She does it exquisitely well. It works even in foreign circumstances. At a Washington conference with 2000 people, [staff] can find the two people who should be introduced to each other and say things to each about the other that almost always makes the connection.

Support and Knowledge Flowing Among Peers

The moral support means a lot to centers It's reassuring to be able to contact them . . . sometimes you get the feeling you're all alone out there.

The accumulation of wisdom amongst the staff -- using it in casual conversation, in responding to ideas and projects -- for example, "so-and-so has found . . ." Not their great wisdom, but the experience of so-and-so.

Cliquishness?

I have a sense of cliques that keep developing -- a popular group at any particular time. I don't know where it comes from. I can't give any evidence, I just have a feeling.

No, I don't think (there's an in-group). It may look that way since some people know each other from a long time -- but I don't think so The Exchange brings people together.

In the last three years, they've done an exceptionally good job of being a mechanism for federally funded centers and older centers to come together. At least that's one way that bridges those two that might be separate factions. (TCE) very consciously has made efforts to provide common grounds for differently funded centers with varied levels of experience and depth to come together. That's been a very essential need because federal funding has been designed for isolation . . . (TCE) has provided at least some common ground.

Stretched Too Thin?

I don't think they care a lot overtly about us. Maybe they're trying to survive themselves. They're not making contact -- "how is it folks, are you okay, are you open, what are your problems, let us refer you to someone." Maybe that's not a fair expectation -- but it's reasonable since we've had such long contact.

Strains on Established Centers

One of the tensions that I had during that time was that we were so involved in our work, I was very resentful of the time spent talking about it. It eats away at your time -- before you know it, you're not doing it, you're telling it. [Staff] convinced me it was a debt we owed. We were among the first. We never had enough time to adequately describe ourselves. So I felt that it was very important for newer centers to be able to not have to reinvent the wheel . . .

• Mini-Awards

Mini-awards are small grants to enable beginners to visit established centers and to bring in people from established centers. Some awards are also made to support "intensive study" by people in established centers who wish to deepen their knowledge in some area. Awards are generally for less than three hundred dollars and are made non-competitively in response to all requests that fit the guidelines.

For us to get started, the Exchange was crucial. We got money to visit centers and talk to other people. It was the one help we got. You didn't have to show credentials before they would respect you . . . The contacts we made through their grants were invaluable.

• Workparties

Workparties are small working meetings or retreats during which network members compare experiences, share ideas, and solve problems.

The reflective fireside chats every morning -- two people reflected on their own work -- excellent. Watching someone's own head work, you could clarify your own thinking and questions. I was able to give and to learn. It was a climate of inquiry I hadn't seen before.

It was good for me as a baptism I learned concrete things about how people organize their teachers' centers in different ways . . . I came back uplifted, with new spirit, . . . but not with training It's more opening you up to think of possibilities of your own [Second person] You share problems and solutions, how to reach the public, how to create materials, etc. It's not skill training, it's mind training.

● Research Awards

The Exchange serves as a kind of grants contractor, making small awards for research on teachers' centers. The research program was undertaken reluctantly, with strong urging from LPS and against the opposition of the Exchange's Advisory Committee. Many committee members believed that making grant awards on a competitive basis would generate tensions and jealousies within the network and would compromise the Exchange's status of benign neutrality.

Partly because LPS was determined to launch such a program and might otherwise be forced to use a grants contractor, which could not be expected to understand centers or the network nearly so well as the Exchange, and partly because the grants program offered another means to capture and pass on experienced centers' learnings, the Exchange agreed to take the research program on as a "considered risk."

According to Duckworth and her colleagues, "Many people we interviewed see the research program in its present form as the least essential of the Exchange activities. They see potential contributions but are skeptical about their utility for practitioners. The amount of staff time seems to them out of proportion to its contribution to the overall purposes of the Exchange. Several respondents also argued that the awards were too small and too brief (one year)."³⁹

● Publications

The report notes that the Exchange's publications include two books of essays, seven Occasional Papers, a number of occasional Bulletins, three editions of a Directory of Centers, and a slide show.

. . . there's a quality of leadership and reflective attitude about teachers' centering and teaching that is notable. It's seen in their writing. They have a lot to say and they say it well Early in the movement that was lacking.

When I've spoken locally, I've often used quotes from [staff's] essays, because she has a way of explaining things. You can put her words into other people's minds.

Also, it's a political tool for me. We were selected to be in the Directory. That has helped me a hundred times. At budget time, for political credibility.

• Advocacy and Liaison With External Organizations

The two main priorities for advocacy activities by the Exchange have been influencing the shape of the USOE Teachers Centers Program and promoting the ideas and fortunes of centers in the network. Pursuing the first priority involved counseling network members concerning the directions in which the regulations should be reshaped and concerning ways of lobbying for these directions. After the regulations were issued, the Exchange also helped members write proposals that fit the guidelines. According to "Reflections," "Network members valued these efforts; they felt they had fought the good fight, even though they did not win many victories."⁴⁰ The report also indicates that most network members believe the Exchange had done a good job of promoting the original centers' "shared premises" and of lending a hand to imperiled individual centers. But there apparently are some continuing tensions and difficulties at the point where the two priorities come together:

They're in a hard place. I don't know what role they can play. They may feel there isn't any use in taking a stand. To make clear what I mean, I have to articulate the difference between independent and federally funded centers: direction by participants or direction by a model, be it a curriculum model or a governance model -- that's a basic difference. There may be federal centers that have this leeway. [But] having a [policy] board doesn't [necessarily] make a teachers' center responsive to participants. You can't do both. You can't be an advocate for both. If you're federally funded like the Exchange and if you see the federal centers have no commitment, you're in a hard place.

The Feds think only of their 89 teachers' centers. They don't remember there are all these wonderful centers from which their idea sprang, plus England. So it's nifty when Schmieder introduces [Exchange staff members]. It honors the tradition. It was so good for whoever the person was who thought that up -- terrific to keep those channels open The Teachers' Center Exchange is the only contact we have with the old teachers' centers, unless we have some personal contact. [At ED meetings] We are not encouraged to talk about locally funded centers. I learned that quickly. That's not even part of the horizon. I'm ignored or dismissed when I mention them So in our brainstorming sessions we reinvent the wheel.

Conclusion

Although the teachers' centers served by the Exchange value its assistance highly, and although many teachers seem equally to value the help and support they get from centers, it now seems unlikely that the Exchange will survive the waves of budget cuts

that have washed over NIE. Ironically, NIE's policy of "regionalism" -- intended to improve the articulation between research and practice by devolving control over regional laboratories' programs to educators within each region -- has contributed to the demise of the Exchange. The Exchange lacks a sufficiently powerful constituency within the area served by Far West Laboratory for Educational R&D to maintain the program in highly competitive times.

Nor does the management of the Laboratory appear to value the Exchange sufficiently to preserve it despite the lack of a constituency. The Exchange may simply have been out of place in a research and development institution. Though the Exchange and the centers associated with it have sought to promote and draw upon research, the whole model of change represented by the Exchange may be too discrepant with classical R&D to survive at a research laboratory.

Problem, Strategy, and Assumptions in the Teachers' Centers Exchange

Problem

The essential problem is that teachers need sustained personal and intellectual support through professional development activities which they initiate and control.

Strategy

The strategy is to facilitate communication (1) among established centers that provide such support, and (2) between these centers and emerging teachers' centers.

Assumptions Regarding Conditions for Improvement

- that if teachers are to develop professionally, they need
 - * a secure, nurturant learning environment that shelters them from occupational stresses and provides continuing encouragement and support
 - * control over their own professional development activities
 - * opportunities for sustained interaction with other practitioners and with people who can use research and theory to illuminate issues in practice, and
 - * opportunities to create and adapt instructional programs for their students.
- that for most teachers, these conditions are both necessary and sufficient for improvement.

Commentary

Although the teachers' center movement has produced a rich and thoughtful literature on students' learning, varieties of student materials, the teacher's role in promoting learning, teachers' "theories" of teaching, teachers' professional growth, the establishment and operation of teachers' centers, and even the evaluation of educational programs and activities, there appears to be no major impartial evaluation of teachers' centers' impact that would permit confident assessment of centers' underlying assumptions.

The absence of a sophisticated yet cold-eyed evaluation of teachers' centers -- at least centers of the sort promoted by the Exchange -- seems to result from the very nature of the teachers' center movement. First, the fact that it is a movement: a loose network of people and institutions committed to common values and to a common view of how learning "really" occurs. Within these values and broad view of the learning process, a great deal of empirical -- mostly clinical -- research does go on. Close examination of a few students' or teachers' learning, resulting in a kind of near-literary yet grounded essay writing, seems to be the pattern. But there is a considerable skepticism regarding more common quantitative social science techniques and regarding the assumption that evaluation can be scientific, objective, and strictly value-neutral.

Alongside this skepticism of the prevalent modes of evaluation, a project officer responsible for the Exchange perceives "a sense that evaluation would do more harm than good."⁴¹ That is, there is a deep conviction of centers' value, a conviction emerging from personal experience in centers. So evaluation is itself evaluated according to the standard of whether it will help realize centers' potential, not whether it will determine the true value and costs of centers. From an outsider's point of view, this may appear to be the usual defensiveness and blind belief characteristic of the zealous educational innovator. From inside, it seems the expression of rigorous ethical standards: centers are good, what harms them is bad, and crudely quantitative and "objective" social science is likely to harm them.

There have, of course, been attempts to evaluate centers and the open education approach with which centers are frequently associated. But because members of these intertwined movements are so reflective and articulate, serious evaluators soon become embroiled in complex discussions of educational philosophy, epistemology, the ethics of research, and so on. The result, at best, is a type of evaluation currently referred to as "illuminative" -- an evaluation that illuminates, clarifies, and defines the phenomena under review without making summative judgments about them. Whether this is helpful, of course, depends on one's purposes.

At any rate, a detailed review of the literature on centers, focusing on evidence related to their underlying assumptions, is beyond the scope of this study. So we are left with a great question mark. It is possible, of course, to extrapolate from the evidence on other programs. From all accounts, centers do seem to provide intensive, sustained, in-person assistance in addressing problems identified by teachers themselves. And they do appear to interpret research, not merely to make it accessible. So it appears likely that they do promote practice improvement.

At the same time, formal social science research appears to play a limited if significant role within what is essentially a professional development rather than a strictly dissemination activity. If the question is put narrowly, "How may NIE assure that the research it supports actually gets into practice in the nation's schools?", one has to question whether teachers' centers are the most efficient mechanisms for doing so. But if one construes the question more broadly to ask, "How may the federal government support school improvement in a mode that includes significant research utilization?", then teachers' centers appear quite attractive.

Assumptions Regarding System for Supplying Missing Conditions

- that a loose, informal communication network has emerged among "grass roots" teachers' centers across the country
- that by "strengthening and extending" this network, a contractor can promote further development of existing centers while nurturing new centers
- that judicious intervention can strengthen and extend the network without destroying its ability to provide "low energy access to trusted competence"
- that centers can simultaneously (1) retain substantial autonomy from the school systems in which their clients work, (2) promote individual teachers' development and improve the quality of instruction for their students, and (3) survive.

Commentary

To a substantial degree, the first three assumptions above appear to have been born out by the experience of the Teachers' Centers Exchange. The feasibility study which led to the creation of one Exchange uncovered a rather far-flung if loosely connected network of centers that had sprung up at the grassroots level -- initiated, that is, by individuals committed to self-directed learning by teachers, not initiated by government action. Through consultation, workshops, publications, and small grants, the Exchange has managed to intensify communication among experienced centers -- and to open the network to new centers. Most remarkably, all of this has been accomplished without formalizing

and rigidifying the network, without undermining the trust and informality which appear to permit substantive communication.

More problematic, however, is the assumption that the centers can survive as autonomous organizations with strong values that clash with the priority values of most school districts and of the main teachers' organizations. As Exchange publications are at pains to point out, the kind of teachers' center promoted by the Exchange makes very different assumptions about staff development from those on which most district level staff development programs are based. In many districts, the priorities for staff development appear to be set by administrators and supervisors with little influence by practicing teachers. All too frequently, programs are fragmentary, episodic, and bear no necessary relation to the problems experienced by individual teachers. The notion that individual teachers should have opportunities to struggle with their problems in a rich, emotionally supportive, and intellectually stimulating environment, and to do so on a sustained basis, seems foreign to most districts. So persuading districts to support such activity, especially in the face of budget cuts at all levels, is always a high wire maneuver.

For a time it appeared that the teachers' center movement might secure the political clout and funding necessary for survival by allying itself with the major teachers' organizations. Certainly, the alliance would seem natural. But it ran into three different kinds of difficulty. First, as might be expected, the NEA and AFT emphasized teacher-dominated governance of centers. The notion that teachers should control centers seems entirely consistent with the Exchange's position that teachers should have increased control over their own professional development. But Exchange staff believed strongly that an emphasis on governance would distract centers from substantive program considerations and would rigidify them as organizations. The way to ensure responsiveness to individual teachers' needs was to start small, recruit staff committed to responsiveness, grow slowly, and maintain close, substantively focused communication between center staff and the teachers they serve. For their part, teachers' organizations tended to see the centers associated with the Exchange as precious, not concerned to serve the great mass of teachers, but only an elite minority. The arguments against making governance so central appeared to reflect resistance to genuine teacher control of inservice education.

Second, teacher organizations' initial distrust of the Exchange and its network of centers seems to have been communicated to the federal Teacher Center program. As the program progressed, relations between the Exchange and the teacher organizations warmed and deepened. Communication between the Exchange and federal Teacher Center program officials also seems to have improved. Yet, few if any "charter members" of the Exchange network of teachers' centers ever received funds under the program.

Finally, the Reagan administration brought to power a perception that the Teacher Center program was a Carter pay-off to the major teacher organizations. One member of the Reagan transition team referred to the centers funded by the program as "tax-supported union halls." The Education Consolidation and Improvement Act of 1981 eliminated the Teacher Center program.

Recently, budget cuts at NIE have threatened the Exchange itself. Faced with demands to trim its budget by 15%, the Director of Far West Laboratory has proposed to eliminate the Exchange. If the program is eliminated, the grassroots teachers' centers that inspired the program and the many centers which the Exchange has helped to spawn will find themselves in the same situation which centers faced when the Exchange was created -- enjoying widespread critical acclaim and diminishing prospects for survival.

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CHAPTER FIVE: THE SCHOOL PRACTICE AND SERVICE DIVISION

As related in Chapter Three, in the spring of 1974, with NIE's very existence threatened by Congressional impatience for demonstrable improvements in educational practice rather than promises of future results, NIE Acting Director Emerson Elliott decided to increase sharply the portion of the Institute's budget allocated to dissemination. Elliott revived discussions with representatives of the Chief State School Officers, and this led in turn to initiation of the State Dissemination Capacity Building Program. But while this SEA-focused activity was seen as necessary politically and symbolically -- to gain the Chiefs' support for the Institute and to dramatize a commitment to the improvement of practice -- the program was not fully sufficient to the task. To satisfy Congressional and other critics, an additional, more direct and activist effort to get research into practice seemed to be required.

Accordingly, Elliott began to search for new ideas and "new blood" for the Institute's dissemination program. Soon, during meetings at the Far West Laboratory for Educational Research and Development in San Francisco, Elliott met Larry Hutchins, subsequently characterized by colleagues as "a creative, mercurial scholar" and as "catholic and inventive" in his thinking. In the course of the meetings, Hutchins expressed a number of ideas consistent with Elliott's belief that both ERIC and SCBP were too narrow and passive in their conception. Elliott decided to recruit Hutchins for a key position in dissemination. Hutchins soon joined NIE to head a School Practice and Services Division within the Dissemination and Resources Group.

When Hutchins joined NIE, then, the Institute was under severe political pressure. This opened opportunities for Hutchins' creativity. But the same pressure had already led to the establishment of SCBP, probably the only NIE program with a constituency strong enough to improve the agency's position on Capitol Hill. Thomas Clemens and his associates in SCBP opposed as a matter of principle any activist attempt to market NIE products through their program. According to one of his then-colleagues, Clemens even opposed any activity that could be construed as "advertising," such as printing and mailing out information on particular NIE-supported products.¹ "Tom had very strong restrictive beliefs about how far it was proper for the federal government to go," his colleague Mollie MacAdams recalls. "He believed you take the products and put them on the stump, and anybody who really wanted them would come and get them." Anything more was an unwarranted intrusion upon the prerogatives of the states and localities.

So the same pressures that afforded Hutchins considerable scope for action had also created a program that placed important constraints upon him. He could not convert the existing program to a more activist approach. Neither could he appear, in starting a new program, to violate the Institute's commitment to the politically powerful Chief State School Officers. Nor even to

violate too openly the principles of the man whose program promised to still if not to win over the Chiefs.

In addition to the constraints imposed by SCBP, Hutchins was hemmed in from the other side by another newly created program -- the Local Problem Solving unit discussed in Chapter Four. Since early in the life of the Institute, LPS' Marc Tucker had argued that formal dissemination systems were incompatible with local educators' natural patterns of information seeking. Tucker claimed that teachers and administrators relied upon informal personal contacts, not formal systems, for ideas to solve problems they encountered. Perhaps more importantly, Tucker argued that school improvement depended largely upon local organizational capabilities and incentives to address problems. Research and development were ultimately at the mercy of local factors. While they could contribute resources for improvement, commitment and capacity at the local level were the engines of change. Worrying about dissemination, Tucker believed, was worrying about the wrong problem. While external forces impressed upon Acting Director Elliott the need for a major initiative in dissemination, from within the Institute he was strongly influenced by the Local Problem Solving argument.

Hutchins not only perceived the political necessity of taking the LPS argument into account but also found himself partly persuaded by it on substantive grounds.² That is, he agreed that local forces and processes determined how and how well R&D results would be used. But he believed that the concept of dissemination might be expanded to include assistance in problem solving, choosing and adapting R&D products, and putting them into practice.

Had several events that occurred just before Hutchins joined the Institute not dictated otherwise, Hutchins and Tucker might have formed a natural alliance. Tucker had reinforced Elliott's positive estimation of Hutchins, encouraged Elliott to hire him, and at one point intervened to unshag the papers needed to bring Hutchins on board. And it was Tucker who found Hutchins' thinking "catholic and inventive."

But before the Local Problem Solving Program was set up as a separate unit, Tucker had been a candidate to head the entire dissemination unit, as had SCBP head Thomas Clemens. Ideological differences as well as competition for the post had generated a good deal of friction between the two men. Director Thomas Glennan had ultimately passed over both men to recruit Senta Raizen, formerly a participant in planning the Institute and then a Rand Corporation researcher, to head the dissemination unit. As Raizen came on board, Tucker persuaded Glennan and Elliott that his local problem solving notions offered such a challenge to conventional dissemination thinking that they could never be developed to their full potential within the dissemination unit. The whole matter left a bitter edge on dealings between LPS and the Dissemination and Resources Group, an edge that was subsequently sharpened by competition for budgets. So instead of regarding Tucker as an ally, Hutchins became progressively alienated from him.

Thus the stage was set for Hutchins, under Raizen's supervision, to begin planning a new dissemination program. Riding the tide of dissemination's political appeal, Hutchins would nevertheless have to negotiate carefully between Clemens's state-oriented program and Tucker's localism.

The Concept Paper

In April of 1975, Hutchins' planning group issued in a "Concept Paper for the School Practice and Service Division."³ Based on discussions "with educators in 21 states," the paper was presented as a preliminary description and rationale for a program designed "to make information, products, skills, and resources derived from research and development and exemplary practice available to educational practitioners to facilitate their problem solving in targeted areas." In an apparent effort to mollify Clemens, the paper's foreword apologized for intruding upon local autonomy but promised over time to broaden the resource base and the range of problems addressed, so that local districts might choose foci and products consistent with their own problems and concerns.

The paper began by invoking language from the Senate Conference report on NIE's authorization, which declared it to be the intent of Congress that NIE to take on "the whole complex set of dissemination/utilization functions that are desirable in this area." A broad construction was important, the paper pointed out, "because if the term dissemination were restricted to only the concept of spreading or diffusing information about R&D innovations, rather than helping schools adopt and implement them, the prospect for meeting the overall legislative mandate would be weakened substantially." Accordingly, the School Practice and Service Division (SPSD) was planning "the Institute's major thrust into support for R&D implementation and utilization."⁴ SPSPD was portrayed as complementary to, not competitive with, related NIE activity, including the Local Problem Solving Program and the division which housed ERIC and the State Dissemination Capacity Building Program.

In a brief but rigorously self-conscious section, the paper laid out not only the goal, objectives, and strategies of the program but also the assumptions underlying each. It was explicitly noted that the strength of the program depended upon the validity of these assumptions. The goal statement exemplifies the care with which the section was balanced and qualified:

The major goal of the program is to help solve locally defined problems in selected content areas through increased utilization of existing research and development (R&D) outcomes and methods.⁵

Note that the program will "help solve" problems, not "solve" them all by itself. The problems will be "locally defined" (influenced by both Clemens and Tucker), but they will also be in "selected content areas" (corresponding to areas in which NIE has products

to get out). Actual utilization of presumably worthy materials will be increased without intruding excessively upon local authority to define problems and choose solutions.

The assumptions said to underlie the goal are these:

- there are identifiable educational problems to be solved,
- R&D outcomes and methods are viable tools with which educational problems can be solved,
- existing R&D outcomes and methods are of sufficient quality to warrant their use, and
- those outcomes and methods are not now in general use.

Emphasizing the modesty of the assumptions, the paper noted that "... acceptance of these assumptions does not require one to believe that all problems are amenable to R&D solutions, that R&D alone can actually solve problems, or that existing R&D outcomes and methods are uniformly high in quality and generalizability."⁷

To achieve the program's goal, two strategies will be pursued, a "consumer information" strategy and a "linkage" strategy. The consumer information strategy is intended to bring together and array descriptive material on the various R&D products related to the problem areas selected as foci for the program. The implication is that while local educators may not search out the full array of potential "solutions" to specified problems on their own, if presented with a readily reviewed display of alternatives, they will deliberate more systematically and choose more rationally. The consumer information strategy would also entail assuring the availability of R&D products in a readily usable form -- many were said to be unavailable or available only on ERIC microfiche.

The consumer information approach was distinguished from a product-push or product-advocacy approach. It was characterized as a "consumer-oriented, problem-advocacy" strategy. These terms blend into the gray rhetoric of federal programs -- unless one hears them against the background of policy debates then occurring within the agency. "Product pushing" is exactly what Hutchins stood accused of by several ERIC and SCBP advocates. The State Capacity Building Program was building "comprehensive, generalized" dissemination systems -- not just "pushing NIE products." Through the paper, Hutchins rejoined that he was advocating attention to problems within a particular area, not adoption of any specific product or set of products. In fact, he claimed to be "consumer-oriented," attuned to the need potential users of R&D have for reliable, easily compared information on the product alternatives available to them.

Another contrast that may be heard, if one listens carefully to the debate in the background, is between the proposed SPSPD program and the Local Problem Solving program. Paralleling the State Dissemination Capacity Building Program at the state level, LPS emphasized the development of generic capacities to solve locally identified problems. Perhaps without fully realizing it, Hutchins was arguing that the LPS approach is inconsistent with what really moves local educators to action -- concern about specific problems, not about generic capabilities for solving problems. In contrast SPSPD planned to advocate addressing locally defined problems in certain areas (initially in the areas of reading and career education) and to enhance local educators' rationality in addressing these problems, partly by arraying the "consumer information" on relevant R&D products.

The meaning of "linkage," Hutchins' term for the second strategy to be pursued by SPSPD, changed considerably over the life of the program. In the concept paper, "linkage" was said to imply "building upon the work of existing dissemination programs and agencies rather than creating new ones; this has resulted in activities that can be combined with existing programs, and activities that capitalize on shared resources, collaborative efforts, and joint funding."8 According to the paper, the "R&D Utilization Component" of the program -- the component that will relate most directly to schools and districts -- will work through networks of agencies already engaged in dissemination activities. New combinations of agencies, such as interstate consortia or intra-state networks of intermediate agencies, may be formed. But no entirely new agencies will be created.

Here Hutchins is walking a fine line. On the one hand, he wants to avoid being accused of starting yet another federal dissemination program that ignores capabilities already in place. He especially wants to avoid being perceived as undermining NIE's commitment to the states. On the other hand, however, he does want to initiate some new types of activity -- providing consumer information and utilization support to local schools -- both of which are rejected by SCBP program manager Clemens. SEAs and consortia of SEAs will be eligible to compete for funds under the new program; but in order to win contracts, they will have to buy into Hutchins' aggressive or activist strategy. Additional incentive to do so is created by the prospect of competing with other agencies, including certain private non-profits, which have already embraced activist approaches.

Thus, politically, "linkage" offered a way of piloting an activist dissemination strategy through a set of internal and external dangers, and even of influencing the sources of potential threat. Substantively, linkage was part of an R&D Utilization Component which would provide problem-solving and implementation assistance to local districts and schools. Over the intermediate to long run, hope was to persuade SEA officials of the value of an active focus on promoting and supporting genuine utilization of

research by local schools, and thus by indirection to influence the policies of the State Dissemination Capacity Building Program.⁹

One additional aspect of the projected program deserves comment here. According to the concept paper, not only will the Consumer Information Component include exemplary practices along with R&D products, but provision will also be made to interrelate exemplary practice and research in a new way. Conventionally, exemplary practices are "validated" or screened for effectiveness through the use of evaluation methods borrowed from the R&D community. Thus, while such innovations are developed by "practitioners" rather than researchers, they must pass through the R&D screen to get into the pool of acceptable products.

Hutchins' paper embraces the validation notion and promises to provide assistance to SEAs in setting up state level programs to validate and disseminate exemplary practices. But it also proposes to "consolidate existing theoretical and empirical research with information about . . . exemplary practices. The purpose would be to provide an analytical framework for making specific adoption/adaptation decisions Activities would include identifying propositions that current research suggests as valid for instruction in a particular problem area and relating these research-based propositions to information about practices that educators currently use and find effective. The result, for example, might be answers to questions about the utility of adapting an existing 'decoding' approach to initial reading to include activities that reflect a 'language experience' frame of reference."¹⁰ Although this new way of combining research with exemplary practice was not presented as a major feature of the program, it does seem to represent an intriguing instance of "catholic and inventive" thinking.

From Concept Paper to Request for Proposal

The path from circulation of the concept paper for comment to release of the Request for Proposal (RFP) in November of 1975 was tortuous. In fact, according to Corwin,¹¹ the RFP went through approximately thirty revisions. Corwin attributes this in part to Hutchins' having delegated the writing to SPSP staff without specifying what he wanted very clearly, and in part to the staff's conscientious effort to respond to the comments which had been solicited.

In addition, Corwin notes, two major and closely related questions proved difficult to resolve. The first concerned the proper emphasis to give the Consumer Information Component versus the R&D Utilization Component. While the two components were conceived as complementary and mutually necessary, they did compete for the same dollars. How much of the money should go to developing decision-oriented, synoptic materials on R&D products and exemplary practices (consumer information) and how much should go to support "linking agents" to provide technical assistance to schools (R&D utilization)?

The classic argument against heavy reliance on technical assistance -- dating back at least to Havelock's magisterial review of the change literature¹² -- was that it would be prohibitively expensive to provide individualized service to schools in all of the nation's 17,000 districts. Preparing materials might require a substantial initial investment, but they could be used very broadly, and would become quite cheap on a per-unit basis. Besides, it was argued, the whole point of the program was to get NIE and other federally supported R&D products out into the schools. Spending a substantial amount on technical assistance would divert resources from an R&D strategy for school improvement into a technical assistance strategy.

The counterargument was that ERIC's experience had already shown that print information was insufficient to effect real change in educational practice. If NIE products were to find their way into use, and not merely onto the shelves of more schools, a substantial amount of in-person assistance was essential. The Pilot State Dissemination Program had demonstrated the effectiveness of field agents or "linking agents." The SCBP wasn't as effective as it should be, not primarily because consolidated, decision-oriented information on R&D products wasn't available, but because the program had laid insufficient stress on linking agents' going beyond the mere provision of information to support adoption, adaptation, and implementation of R&D in schools. Technical assistance might be expensive, but it was effective. What good was an inexpensive program if it was also ineffective?

The second question that made it difficult to get from a concept paper to an RFP was closely related to the first: whether linking agents should try to build enduring, generic problem solving capacities while helping schools address a particular problem. Arguing strongly in favor of an emphasis on building an enduring capacity was one member of the RFP review committee, a member of the Local Problem Solving Program's staff. (Institute policy dictated that membership in RFP review committee should not be confined to the staff of the sponsoring program alone.) Hutchins, on the other hand, was convinced that such a goal was beyond the power of the program to achieve and that any substantial attention to underlying, long-term capabilities would divert resources from the program's original focus on getting NIE products into practice.

This does not mean, however, that Hutchins or his staff were insensitive to the role of organizational structures and processes in change efforts. While the RFP stopped short of embracing the enhancement of enduring capacities as a goal, it did call specifically for contractors to provide assistance in problem definition, consideration of alternatives, adaptation, implementation, and even evaluation of the product's effectiveness in the adopting setting. It also called for broad involvement of teachers and parents along with administrators in all phases of the local efforts.

The Consumer Information Component appears to have declined in importance between publication of the concept paper and issuance of the RFP. But this seems to have resulted more from difficulties experienced by the SPSP staff responsible for consumer information than from a deliberate decision to downgrade its importance. The concept paper envisioned that virtually all consumer information would be prepared centrally, by a single contractor or agency that would feed material to a number of different R&D Utilization Contractors. For reasons which remaining NIE dissemination staff seem reluctant to discuss, no separate RFP for preparation of consumer information was ever issued. One official commented that the consumer information staff "just never could get their act together."¹³ (A discussion of substantive reasons for the difficulties NIE staff experienced in attempting to develop Hutchin's consumer information component is included later in this chapter.)

For whatever reasons, responsibility for "consolidating the knowledge base in the problem area" was folded into the RFP for contractors to assist in utilization. This was to involve at least two steps: (1) a literature search and synthesis, plus consultation with experts in the area and analysis of successful existing school programs, and (2) transformation of this information into a form suitable for local school personnel. Knowledge consolidation was to be done in two problem areas -- basic skills and career education.

Four appropriate forms of "linkage" were specified:

- state organized systems of intermediate service agencies,
- state systems not using intermediate service agencies,
- interstate consortia of schools organized as groups of users, and
- interstate consortia of agencies primarily devoted to the production of R&D outcomes and/or delivery of technical assistance services.

Obviously, the range of acceptable organizational arrangements was quite broad, opening the door for a great diversity of applicants. In any event, the RFP declared, "The organizations selected for a specific project should be chosen for their long-term commitment to helping schools in a comprehensive, coordinated manner."¹⁴

In response to the Request for Proposals, SPSP received 41 eligible proposals.¹⁵ Of these thirteen were from state education agencies, nine from institutions of higher education, and four were from R&D labs and centers. Only four came from school districts. As Corwin noted, putting together consortia of geographically dispersed districts as suggested in the RFP proved extremely difficult for the few districts that attempted it.

The process of choosing among the offerors apparently revived debate over interpretation of key ideas in the Request for Proposals. Corwin lays heavy stress on the ambiguity or imprecision of definition which the need for further debate over fundamentals implies. He even quotes one participant to the effect that the program was "little more than an 'ink blot' to which everyone applies his own meaning." Thomas Israel, who under Hutchins' leadership directed the R&D Utilization Program, regards this as a gross exaggeration. Corwin concedes that, "Part of this difference of opinion rests upon alternative views of how a program should be designed -- as an operational plan or as a flexible guide."¹⁶

Overall, the R&D Utilization Program seems an interesting example of a program that changed and grew through progressive specification and revision. In part, as Corwin notes, RDU evolved through "slippage" -- an accumulation of decisions taken not for substantive reasons, but in response to logistical or administrative snafus. The decision to distribute responsibility for preparing consumer information materials across the several contracts ultimately let, rather than centralizing this function, seems a prime example of such "slippage." But Corwin points out that RDU also evolved through reflection upon puzzles and conceptual difficulties arising in the course of debate and design. Treating the early versions of the design as "flexible guides" rather than as fixed "operational plans" may have made room for slippage, but it also permitted a good deal of learning. As we shall see, several of the lessons thus learned were later articulated in the RFP for a study of the utilization assistance contractors.

For a number of reasons, the assistance contracts were not let until June of 1976 -- seven months after the RFP was issued. The delay was attributable to a combination of (1) disputes among members of the proposal review committee; (2) the size of the total work load (21 serious contenders, each proposal running 100 to 300 pages); (3) a conflict over how much control SPSP should exercise and how much should be ceded to reviewers from outside the program; and (4) a need for more money to fund a seventh contract. Hutchins recalls securing money for the seventh contract through bargaining with Institute leadership; he traded a reduction in the duration of the program from four to three years in return for more money during the three years.

A total of \$8.3 million was eventually allocated for the seven assistance contracts, whose total budgets ranged from \$1.4 million to \$835,000 for the three years. Another \$1.7 million was spent on the research contract. RDU was a major action research project, similar in scale to the Local Problem Solving Program's Urban Sites/DTA project.¹⁷

The Research Contract

Although the contract to study the work of the RDU projects was integral to RDU -- the program being designed as a piece of action research, not primarily as a service program -- development of the research RFP was beset by so many difficulties that it was not issued until summer of 1977. An award was finally made in the Spring of 1978.

Three main factors accounted for the delay. The first was a persistent problem for SPSD and a recurrent problem in the government: a hiring freeze. The freeze prevented Hutchins and his colleagues from hiring new people with expertise in dissemination and educational change; it also resulted in an overload for the people already on board.

The second factor was a protracted wrangle between Hutchins and an Evaluation Coordinator hired in May 1975, about the time thinking about the Request for Proposal began. Although viewed by Dissemination and Resources Group Director Senta Raizen as a technical resource for staff all across the group, the Evaluation Coordinator saw her responsibilities differently. She believed that she had an obligation to help assure adequate quality control over all projects supported by the dissemination unit. Hutchins, by contrast, saw the study contract as a means of learning about dissemination by documenting and analyzing the work of the assistance contractors. He saw an emphasis on evaluating their work as not merely misplaced but as actually counterproductive to his purposes; an evaluative orientation would impair the whole relationship with the contractors from whose work he proposed to learn.

In research design terms, the orientation to learning translated for Hutchins into a large number of case studies of work in individual schools. The case studies would capture the reality of the change process, and by analyzing them, one could begin to isolate the truly important variables. The Evaluation Coordinator feared that the profusion of case studies would result only in the accumulation of mounds of non-comparable data about idiosyncratic events.

Underlying these "lofty arguments" Corwin perceives some "practical issues," such as "whether the primary objective was to obtain a broad understanding of the processes taking place or whether it was to evaluate certain outcomes. The latter would be threatening to the persons who staffed the projects, while the former might encourage these people to 'buy in' and cooperate with the study."¹⁸ Certainly, Hutchins favored the "broad understanding" objective, though it is not at all clear that he did so for "practical reasons." One would have thought that a million dollar contract would be sufficient to persuade a project to "buy in." The RFP resolved the issue by leaving room for both case studies and collection of survey data on prespecified variables.

The third factor contributing to the delay in issuing the research RFP was a conflict with the Office of Management and the Budget. OMB was responsible for reviewing all instruments designed to collect data for the government from any significant number of citizens. Originally, the purpose of this review was to minimize the burden of responding to government demands for information by ruling out the collection of data to which the government already had access. In the case of RDU, OMB's initial objection was consistent with this responsibility. OMB questioned whether the RDU study was needed, when the government was already sponsoring a large scale study of educational change -- the well-known Rand "Change Agent" study. The fact that Rand was studying programs that sponsor locally developed innovations while the RDU study would focus on externally developed and disseminated innovations appears to have eluded notice by OMB.

After the OMB clearance office raised the question of redundancy, the OMB budget office also began to raise questions. According to Corwin, at the very inception of the Institute, OMB had objected to the transfer of the lead responsibility in dissemination from the Office of Education to NIE. OMB officials viewed the Institute as a policy research and analysis agency serving the executive branch and Congress: NIE's job was to observe, analyze, and report on the efficacy of various programs and policies, not to mount major service programs in the guise of dissemination. The RDU assistance contracts had somehow slipped by. So now the research component was the only remaining handle by which OMB could grasp the program and drag it to a halt.

Two devices were used to get out of OMB's grasp. First, the interim data collection effort which had precipitated the dispute abandoned survey methods in favor of case study and other methods which were less obviously susceptible to OMB review. And second, the planned study of RDU was camouflaged as an "evaluation." This meant that the study did not have to be justified by showing that it would contribute fundamental insights different from those generated by the Rand Change Agent study. It could be argued simply that an eight million dollar program of assistance to schools required some evaluation as an expression of the government's fiduciary responsibilities.

There were, of course, a brace of ironies in this turn of events. Calling the study an evaluation in order to get it by OMB was directly contrary to Hutchins' position in the internal dispute with the Evaluation Coordinator. Further, the evaluation ploy tacitly acknowledged that NIE had launched a major service program. It was claimed only that once launched, the program had to be watched. Ironical or not, the ploy worked well enough to permit Hutchins, Israel, and their colleagues to get on with the research RFP. Calling the study an evaluation apparently did cause some confusion at times, but Corwin maintains that the fundamental purpose of the program was never seriously compromised by the move.

Despite the bureaucratic vicissitudes to which its development was subject, the Request for Proposals proved a thoughtful document. In fact, it integrated into a single framework not only the varied assistance projects funded before it was issued, but also many of the ideas about dissemination and change embodied in the other programs discussed in previous chapters.

In the framework, or "paradigm," a series of conditions are hypothesized to be necessary and sufficient to effect change in educational practice. They include the following:

- Reasons for Change

By "reasons for change," Hutchins actually seems to mean stimuli or motives for change. He includes stimuli from outside the school which have been "internalized" as well as motivations which arise from within. He also notes that the reasons, regardless of source, must be "transformed into incentives for the individuals involved."

- Knowledge

"Knowledge" is used very broadly to include understanding of the reasons for change, awareness of alternatives to the status quo, thorough acquaintance with the innovation selected for use, and reasonable expectations about the likely consequences of the change.

- An Innovation

While the innovation may be developed internally or selected from outside sources, there must be a well-defined way of doing things that is different from current practice yet consistent with local needs and constraints. Further, this innovation must be capable of producing the desired changes if only it is implemented faithfully and expertly. Hutchins notes that the latter provision is to be met in RDU through "'front end' quality control -- encouraging the selection of R&D outcomes with proven effectiveness, or (through) 'tail end' provisions for site-specific evaluations of the effectiveness of the change effort."19

- Supportive Organizational Environment

The organizational environment must be supportive both affectively (neutralizing threat, offering encouragement) and managerially (capable of defining goals, allocating tasks across roles, gathering and using feedback, etc.).

- Material Resources

Dollars, equipment, curricular materials, etc.

- Human Resources

Enough people with the right skills and energy.

- Plan

There must be a clear but flexible plan which commands the commitment of people involved in the change effort.

- Time

Enough time to put the innovation into practice, get things working right, and observe the results.

- Trigger

Hutchins actually calls this necessary condition an "opportunity," but "trigger" or as he says, "triggering mechanism" seems closer to what is really intended.

The central hypothesis of RDU, then, is given in the following paragraph:

In the presence of all of the conditions described above, it is hypothesized that change will occur. In the absence of such conditions it can be said that there is a discrepancy between the conditions necessary for change and those that exist. When discrepancies exist, an agent (an individual, an organization, a "system" of organizations) can undertake to provide services and/or stimulate internal capacity to correct the deficiency. When applied from outside the school, these services constitute a set of 'tactics' or support services. For example, a variety of information tactics can be deployed when knowledge is deficient. Training or the use of consultants can be arranged when human resources are inadequate. Financial resources can be supplied when they are deficient. Innovations can be made available when there isn't one available from within. These tactics can, in turn, be implemented in a pattern or strategy such as the one implied in 'systems,' organizational development, or capacity building approaches.²⁰

An uncharitable observer might remark that Hutchins had simply prepared a recipe that included every conceivable known ingredient for change. But it is important to remember that the ingredients had been produced in a slow, diffuse way over the preceding twenty years and that merely assembling them was a contribution. Most federal dissemination policymakers were either oblivious to all but one or two of them or so fiercely partisan about a particular approach that they could not imagine combining several of them in a new way.

Further, Hutchins not only assembled the full set of elements but also suggested that in any given setting, all or most of them might already be present -- including the "knowledge" and the "innovations" which NIE was created to develop. In different

districts or schools, conditions might call for the application of different theories of dissemination and change. That is, the proper intervention, if any, was seen to be contingent upon the absence of necessary conditions in each local site. The proper intervention for a given site might even be an assemblage of tactics advocated by partisans of different change theories.

By comparison, concerning "linkage" or the organizational arrangements through which local conditions might be assessed and missing conditions supplied, the evaluation design evidenced less clear and detailed thinking. To be sure, both the evaluation design and the RFP for the assistance projects that went before it did discuss the network of organizations and organizational arrangements through which dissemination and assistance might be carried out. But the ideas advanced and the questions posed about "linkage" tended to treat these organizations simply as a vehicle for RDU's purposes, not as a medium with certain properties of its own -- properties that would determine (1) the degree to which the program would actually be implemented, and (2) the extent to which the linking organizations would institutionalize the capability to provide RDU-style services after the NIE budget was exhausted.

In fact, it is as if Hutchins, realistically skeptical about the power of RDU to develop and leave behind enduring capacities for problem solving in the local schools to be served by the program, unwittingly assumed that the linking organizations could and were motivated to develop and maintain their own capacities to provide service. Or perhaps it was assumed that a number of organizations already had such capabilities, and all they needed to demonstrate the power of their potential was a temporary infusion of resources. As it turns out, this latter assumption was not too far off. Implementation appears to have gone unusually well in RDU; institutionalization, however, may be a different matter.

The following selection illustrates the thinking about "linkage" that characterized the evaluation design:

The assumption behind linkages is that they are necessary to facilitate the use of resources that are external to a local school or other user. Many of the discussions of linkage are in the context of the use of information that is gained from sources external to a school; for example, linkages are said to exist when someone or some mechanism exists for a local school practitioner to obtain knowledge that was not known to exist before. But linkages can be seen in a broader context. When a school staff needs training, what resources exist to develop and conduct this training? Can they provide it for themselves or do they need someone or some set of formal mechanisms to help bring that resource to them? If material resources are needed to support improvements, what, if any, linkages exist to make them available; for example, are federal resources from one program available for support to others? The R&D Utilization Program

proposes to study the linkages involved in its projects and to assess their utility in bringing necessary support services to schools.²¹

The design thus broadens the conception of what flows through linkages to include resources of all types, not solely R&D products. It also envisions -- as did the RFP for the assistance contracts -- complex arrangements among diverse organizations to deliver a range of resources to individual schools. The conception of linkage is more expansive than formulations which identify the whole notion with the specific role of "linkers" who bring resources to schools.

When the evaluation-research Request for Proposal was issued in the summer of 1977, it elicited only two responses. Representatives from three of the assistance projects participated in the proposal review along with NIE officials and an evaluation coordinator from the Office of Education. RDU officials reportedly saw project participation in the review as desirable to ensure that (1) bidders understood the program well, (2) the plans for the evaluation would not disrupt their work, and (3) the proposed approach would yield information and insights that would be useful to them as practicing disseminators. A role in choosing the research contractor was also thought likely to increase projects' cooperation with the study. While RDU officials say that the projects' participation never threatened the integrity of the study, Corwin argues that "dangers of subtle bias are inherent in such arrangements. Whether it is called evaluation or research, there will always be questions and viewpoints that may prove uncomfortable to the parties being studied."²² Thomas Israel, the primary program manager for RDU, hotly disputes Corwin's assertion. Israel says there is simply "no evidence" to support it.

In any event, the research contract was awarded to Abt Associates, Inc. of Cambridge, Massachusetts. The budget for the study was approximately \$1.7 million -- a very large study, but not nearly so large as the approximately \$5 million originally projected for Local Problem Solving's Documentation and Technical Assistance project. (It should be noted, however, that DTA was intended to include a substantial amount of materials development and technical assistance in addition to the research on nine urban projects.)

The Findings: It Works

At the writing of this chapter, the complete versions of Abt Associates' final reports on the work of the RDU projects had not yet been approved and released by NIE.* But Abt and NIE have released a number of preliminary papers. The central message of

*The Abt reports have since been published by NIE. See Louis, R. and S. Rosenblum, Linking R&D with Local Schools: A Summary of Implications for Dissemination and School Improvement Programs (Washington, D.C.: NIE, 1981).

the reports is that RDU achieved very considerable success. And as the data are analyzed and interpreted more and more fully, this message seems to grow stronger and clearer.

By November of 1980, when Karen Seashore Louis and her colleagues issued their first major preliminary paper, the elements of the RDU strategy had evolved considerably from the ideas expressed in Hutchins' original "concept paper." According to Louis et al., the seven RDU projects were funded to:

- organize a linkage system, or network of national, state, and other external resources, including information and human resources which would be made available to school personnel;
- apply research-based products or ideas to school problems; and
- develop a problem-solving process, whereby schools would systematically identify such problems, and select and implement new ideas.²³

In practice, Louis writes, the linkage system notion was generally translated into "the use of linking agents to coordinate the network of external resources that was developed at the project level."²⁴ The original plan to have consolidated, interpretive information on the full range of research, products, and exemplary practices developed centrally for use by all projects was displaced by project-by-project development of "a knowledge base, or pool of products or practices that were screened for quality, availability, and transferability." As for the local problem-solving element of the program, it has become both more specific and central to the whole program:

Finally, the core of the RDU strategy was to provide each participating school or district with assistance in following a sequence of problem-solving activities, which included:

- systematic needs assessment or problem identification;
- examination of alternative solutions to the problem, focusing particularly on the products of educational R&D;
- selection of a specific solution to address the problem;
- implementation of the solution;
- evaluation and incorporation of both the solution and the problem-solving process.²⁵

The first of these transformations, from "linkage" to "linkers" appears largely nominal. That is, each project did apparently put together a network of people and resources which the linkers "coordinated." And two of the seven projects were multi-state consortia -- complex organizational arrangements for the delivery of resources, some of which were quite remote from user schools. But within the program, attention had generally been focused on the linkers responsible for drawing resources from these networks. I should note that Corwin²⁶ sees the shift as more than semantic; he implies that transforming the systemic notion of linkage into the person of the linker represents a trivialization of the original idea.

The reasons for the second change -- from consumer information to a pool of products and ideas -- have already been touched upon. They seem to relate mainly to difficulties experienced inside NIE in putting together the consumer information component envisioned by Hutchins. As Corwin points out, however, there were serious substantive reasons for these difficulties. It was not merely a matter of the consumer information staff's inability "to get their act together." A brief discussion of the substantive difficulties, in historical context, may be useful.

As explained at the beginning of this chapter, RDU was undertaken as part of an effort to demonstrate to the Congress that educational R&D could indeed make a contribution to improved practice. To do so, RDU would actively promote utilization of products developed with support from NIE. So at first, the consumer information component was at "the core of the RDU strategy" while "linkage" and support for local problem solving were seen as more instrumental to getting R&D products across the school threshold. In response to the concept paper, however, practitioners and consultants had questioned the wisdom of making NIE-supported products so central.

In fact, it was not at all clear that the NIE-supported knowledge base was up to the job -- even if one stretched the point by including the many products developed by the educational Labs and Centers in the days of USOE sponsorship. There was a catalogue of NIE products, but producing consumer information -- syntheses of the research and analysis of relevant products in problem areas, translated into clear and appealing language -- turned out to be far more difficult than had been anticipated. So while there may have been a number of useful products in each of the problem areas targeted by the program, it was impossible to be sure exactly what the overall situation was in each area.

But while the consumer information staff were encountering these difficulties, Tom Israel and his utilization staff had struggled through to an acceptable Request for Proposal which elicited a set of seven assistance contracts. Because the consumer information side was in disarray, the assistance contractors were also made responsible for assembling "product pools." This left open the question of just how and with what criteria the products would be chosen.

One option open to the program was to use only products which had passed the OE-NIE Joint Dissemination Review Panel. The panel had been set up to review the evidence of effectiveness collected by federally supported development projects that sought federal dollars to disseminate the results of their work. The issues surrounding federal "validation" of projects' work were complex and heatedly debated. Though a member of the panel, Hutchins rejected its fundamental premises. He argued that the fact that a project had worked in its originating setting offered no assurance that it would work in a new setting. Some advocates of the JDRP conceded that this was so, but asserted the federal government's responsibility to exercise some quality control over the dissemination of innovations with federal dollar support. After all, they said, evidence that the project worked well in the original setting was better than no evidence of effectiveness at all; further, the JDRP made no promises concerning the efficacy of its validated projects in new settings.

Hutchins and Israel believed that all JDRP-validated products should be eligible for use in RDU, but that the sum of such projects was far too small for RDU. The NIE catalogue* had been far more inclusive in scope, and RDU would be, as well. The unstated fact behind this position was that there just weren't as many certifiably effective NIE products as had been assumed. A fundamental and seemingly unobjectionable assumption of the program was that R&D had produced a large number of excellent products that weren't getting into practice -- that practice was lagging far behind expert knowledge. Experience called this confident assumption into question. It wasn't entirely false, but it was a good deal shakier than had been thought.

The result of all this was the inclusion of a broad range of products and exemplary practices, with the latter -- produced by practitioners rather than formal R&D -- playing a far more important role than anyone would have anticipated. So as we shall see, a program viewed by the Institute's leaders as a way of getting NIE products into practice actually resulted in the dissemination and use of numerous USOE-supported and practitioner-developed products.

Corwin argues rather acerbically that this whole chain of events "does not add up to impressive evidence in support of the original argument that a pool of good R&D products was going to waste."²⁷ He says that both the available pool and NIE's ability to fashion cogent consumer information out of the pool were "grossly overestimated." This is probably true. On the other hand, there is a kind of positive irony in all of this. That is, RDU officials might have held narrowly to the NIE pool in an effort to be faithful to the original political goal. But in fact, they remained truer to the ultimate substantive goal of

*"The NIE catalogue" refers to Catalog of NIE Education Products (two volumes), published by NIE in 1975, which was designed to reference all products that had been developed with NIE's support.

making something useful available to schools than to the narrow political interests of the Institute. This may have resulted in part from the fact that RDU, once underway, required products from some source to justify it. If so, that only heightens the positive irony. In any event, inclusion of NDN sponsored products, led to one of the major findings of the RDU program regarding the use and usefulness of externally developed products -- i.e., that those which have accompanying materials and "trainers" are most likely to be implemented satisfactorily. The NDN program provides assistance for developing and maintaining such back-up for its products, while NIE had made little provision for implementation assistance in connection with products it had sponsored.

The third change reflected in the Abt summary of the RDU strategy was the ascendancy of the local problem-solving notion. It has become "the core of the RDU strategy." It should be noted that helping schools use a rational sequence of problem-solving activities is still intended primarily as a way of supporting the appropriate and accomplished use of R&D products; leaving behind an enduring, generic capacity for problem solving remains secondary. Nevertheless, putting problem-solving assistance at "the core" of RDU does represent a significant shift of priorities from the original purpose of getting the NIE products out.

What were the results of this transmuted program in action? The following points summarize the key preliminary findings reported by Abt:

- Implementation

Approximately 75% of the participating schools remained in the program, adopted new products or practices, and implemented them. In these schools, 78% of the teachers reported that they continue to use the adopted innovation; virtually all the 78% reported planning to continue use.

- Exemplary Practice versus R&D

Exemplary practices developed by practitioners, especially National Diffusion Network programs, were adopted more frequently than R&D products. According to Louis et al, however, "The low rate of adoption of R&D products does not mean that R&D products are not useful to schools. Reasons for low R&D adoption include a less easy access to materials or to training for implementation."

- Quality and Impact

Teachers were generally very positive about the quality of the programs they adopted and reported significant headway on school problems or in areas where improvement was needed.

- Prospects for Institutionalization

School principals said they were making "substantial efforts" to ensure continued use of the adopted products and practices. Most reported that the innovations have been "formally incorporated into curriculum plans"; they also reported a disposition to turn to similar resources in the future.

- Development of Problem-Solving Capacity

The results here are strikingly paradoxical. First, Louis writes, "In a large proportion of the schools, the problem-solving process was viewed as even more valuable than the new program or practice adopted. Teachers who actively participated on the local problem-solving teams more frequently reported personal growth in leadership skills, self-confidence and job satisfaction, and understanding of the school." Despite these perceived benefits, however, "institutionalization of key features of the process (i.e., reliance on external resources, use of teams with high levels of effort, strong teacher participation) rarely occurred. Schools did not generally acquire the internal capacity and commitment to repeat a problem-solving process like that used in the RDU program."²⁹

- Characteristics of Adopted Programs

Of all features of the RDU interventions, the characteristics of the adopted programs are reported to have exerted "the strongest effect." Exerting a positive influence on reported teacher satisfaction and student outcomes were prior field testing of the programs and programs that required extensive changes in the school. Negative influences were local development or extensive local adaptation -- a finding that appears run directly counter to the finding by Berman and Pauly³⁰ that local development and adaptation enhanced ownership and improved implementation.*

- Linking Agent Assistance

Assistance from external linking agents increased both schoolwide impact and the prospects for continuation. Particularly effective were agents who were intensively involved with the schools and who initiated activities rather than merely reacting to initiatives from school people. The training for implementation provided by program developers (as in the NDN) and district specialists was especially helpful.

- School Based Problem-Solving Teams

Broadly representative problem-solving teams with significant decision-making authority also contributed to success. Key elements of such activity were: (1) emphasis on building broad ownership through communication between team members and teachers not on the team, (2) a strongly committed local team leader, (3) adequate planning for implementation, and (4) "strong but tactful intervention by the linking agent" to provide resources.

- Other factors

Also contributing to positive impact were the provision of released time for people on the problem-solving teams, and support from school and/or district administrators.

*Lois-Ellin Datta contends that the programs examined in the Rand study are not actually dissemination or change agent programs. Rather, they are local development programs, being more analogous to the local problem-solving model for change than to the dissemination of programs or projects. Therefore, the Rand programs are not comparable with RDU or NDN. See Lois-Ellin Datta, Damn the Experts and Full Speed Ahead, Evaluation Review, February 1981.

Problem, Strategy, and Assumptions in the Research and Development Utilization Program

This section offers a compact analysis of the way in which RDU defined the dissemination problem, of the program's core strategy for addressing the problem, and of the assumptions underlying the strategy.

Problem

The problem is a deficiency in any of a broad range of conditions requisite for change, including but not limited to R&D resources from outside the school and organizational capabilities for rational problem solving.

Strategy

The strategy is to fund intermediary organizations and consortia of such organizations to (1) enhance schools' problem-solving processes, (2) supply the R&D resources necessary to solve problems thus defined, and (3) stimulate mobilization within client schools and districts to satisfy other conditions for change.

Assumptions Regarding Conditions for Improvement

- that if change is to occur, a complex set of conditions must be satisfied:
 - * reasons for change (triggering events) arising outside school are internalized and are translated into incentives for people initiating and carrying out change efforts
 - * all involved in the change effort know about alternatives to current practice, understand the particular innovation selected to solve the problem, and have reasonable expectations regarding its benefits and other consequences
 - * the innovation to be implemented, whether developed locally or adopted from outside, is clearly defined, matches needs and constraints, and is of good technical quality
 - * the organizational environment is favorable, including leadership that supports the change and is skilled in change management
 - * sufficient material and human resources are present, including funds and skilled people with adequate time allocated for the change process
 - * people involved have a clear plan of action to which they are committed

- * sufficient time is allowed to implement change and to observe outcomes
- o that if all of these conditions are satisfied, change will occur
- o that through sustained in-person consultation and assistance a change agent, supported by a helping organization or system of organizations, can supply missing conditions or stimulate people inside the school or district to mobilize them.

Commentary

The assumptions underlying the Research and Development Utilization Program were made on the basis of a thoughtful examination of a number of different programs and change theories. They were stated explicitly, as on the previous page. And they are impressive in their comprehensiveness and sophistication.

Because they are so comprehensive, it is difficult to assess them individually. The program put a complex of hypotheses to the test simultaneously. In their study of the program, Karen Louis and her colleagues at Abt Associates have confronted the problem of teasing the "variables" apart. Although Abt's variables and analyses do not correspond to the assumptions above in a one-to-one fashion, there is a certain rough correspondence. It is clear, for example, that well-defined innovations, broad participation, and assistance in using a rational problem-solving process were all important to the program's success.

All in all, the micro-level assumptions behind RDU appear to have stood up rather well to examination by the Abt team. Given the original premise behind NIE and therefore behind its dissemination programs, however, there is one very interesting exception: innovations produced through systematic research and development did not fare so well during implementation as did "exemplary practices" produced by practicing educators. According to Louis et al, this reflects the fact that in-person training and assistance to support implementation were more readily available for exemplary practices than for R&D products. It does not necessarily mean that R&D products are somehow intrinsically inferior to practitioner-developed innovations.

Nevertheless, the finding raises an interesting issue. As the meaning of "dissemination" has expanded from the provision of access to or simple transmission of materials, and has come to include assistance in setting up broad-based problem-solving groups, training in the use of innovations, consultation or problems that arise during implementation, and help in planning for institutionalization, it has become progressively more difficult to determine just what is the contribution of "research and development" to the change process. When a major study of a

dissemination program finds that all of these auxiliary services are more crucial to successful implementation and to perceived positive results than is scientific development of innovations, what is one to conclude?

Does this mean, in fact, that the central proposition behind NIE -- that only through R&D could workable solutions to the baffling problems confronting American education be developed -- was simply incorrect? Perhaps what was needed was more training, technical assistance, and consultation by exemplary practitioners for other practitioners. Perhaps the major contribution of research was to discover that this is so? In a broader context, I shall have more to say about this in the final chapter of this report.

Assumptions Regarding System Through Which Missing Conditions May Be Supplied

- that a sufficient number of intermediary organizations (e.g., state education agencies, professional associations, private non-profits) already possess the skills and other necessary capabilities to test the micro-level assumptions above
- that a given intermediary organization which possesses some but not all of the requisite capabilities may form and successfully operate a consortium of organizations with complementary capabilities
- that an independent social science contractor can evaluate the overall effectiveness of the program and isolate factors associated with effective and less effective utilization of R&D products disseminated through the program
- that a broad range of organizations now providing analogous services with little or no direct support from NIE will attend to, assimilate, and put into practice the contractor's findings.

Commentary

The first three macro-level assumptions stated above appear to be supported by the Abt study. A number of organizations and agencies do appear to have developed the capabilities necessary to give RDU's micro-level assumptions a good test. Successful consortia were formed -- although it should be added that Abt saw inefficiency and other drawbacks in the operation of large inter-state consortia. And Abt Associates does appear to have identified the factors contributing to successful utilization of the products and practices disseminated through RDU.

But logic and extrapolation from several types of evidence combine to call the last of RDU's macro-level assumptions into question. That is, NIE dissemination officials appear to assume that the research findings from RDU will find their way into dissemination

practice without NIE's having to provide supports comparable to those which RDU provided to schools and teachers. It may well be that disseminators as a group are more active seekers and users of R&D than are local practitioners. It may also be that many Regional Exchanges (see the next section of this chapter) will assume responsibility for helping SEA and intermediate school district disseminators understand and apply Abt's RDU findings. Time and Abt's new study of the R&D Exchange will tell. But the apparently slight utilization of Sieber's Pilot State Study findings by State Capacity Building projects suggests that utilization of the RDU findings will be far from automatic.

The question of SEAs' utilization of RDU results assumes special importance in light of the Reagan administration's move to consolidate federal education programs and to reduce total federal outlays for education. In the new interorganizational scheme of things, it appears that SEAs will take on much greater prominence than they assumed during the federal era in American education that is now drawing to a close. Ironically, this is occurring as NIE's State Dissemination Capacity Building Program is phasing out. It remains to be seen whether the Institute will find new ways to elevate dissemination on SEAs' priority lists and to improve their dissemination capabilities.

The Research and Development Exchange

In the winter of 1975-76, political developments offered Hutchins and his SPSPD colleagues a second major opportunity to make a program of their ideas. The political dynamic that created this idea arose in the year or so before NIE's authorization. As told in Chapter 1, the late sixties brought ever sharper and more widespread criticism of USOE's handling of educational research. In spite of numerous efforts to correct the perceived inadequacies, USOE's program continued to draw fire for its alleged low quality and lack of coherence or cumulativeness. In one more effort to save itself, the USOE research unit determined to adopt the approach which had won the Defense Department such favorable notice -- comprehensive, centralized planning by defense experts issuing in carefully specified Requests for Proposals through which work was competitively procured. Thus USOE began a move away from "institutional support" for regional educational laboratories and R&D centers, and toward "program purchase." It was anticipated that government specification would ensure coherence and competition would ensure quality.³¹

Soon after NIE's creation, the Institute moved to follow through on this policy. The NIE leadership did not necessarily share OE policymakers' faith in the salubriousness of government specification -- in fact, some wide-open grants competitions that would permit "better people" from the academic community to specify their own questions were contemplated -- but Director Thomas Glennan and other top level policymakers did agree that institutional support for Labs and Centers offered no

incentive to hire "better people" and do good work, and therefore spawned the mediocrity NIE was established to surmount.

The shift to the program purchase policy set off a prolonged political battle between NIE and the Council for Educational Development and Research (CEDaR), an organization devoted to protecting the interests of the educational laboratories and centers established by USOE. The battle was extremely costly to NIE. It added another fiercely effective lobby to those complaining about NIE to an already skeptical Congress.

By the winter of 1975-76, the original leadership of the Institute had been forced out or into quieter roles, and then-Director Harold "Bud" Hodgkinson was saying that while the Institute's policy favored open competition, NIE did in fact have an historical "special relationship" with the Labs and Centers. CEDaR pressure through the Congress secured a set-aside of approximately \$27 million dollars for the Labs and Centers. Totalling the dollars which NIE program groups had planned to spend on Lab and Center work during the fiscal year, Hodgkinson came up with a figure around \$20 million -- about \$7 million short of what the Congress expected the Institute to spend. In response, he created a special "Lab and Center pot" of \$7 million against which program groups could bid. "Non Lab/Center" dollars were harder to come by than ever, so NIE program managers with any combination of ideas and aspirations for budgetary expansion began to recast their plans to dip into "the Lab and Center pot."

For Hutchins, this opportunity represented the convergence of several streams of motivation and concern. While at Far West Laboratory and after joining NIE, he had watched regional laboratories' dissemination and utilization components shrink as "program purchase" dried up support for people who were not on the staff of purchased programs.³² Oriented toward "regional service" rather than R&D on particular topics, dissemination and utilization personnel had generally been located in the Labs' central administration and supported out of the overall institutional grant.

Hutchins says he believed that the dwindling dissemination cadre represented an important capability which, if lost, would only have to be redeveloped within a few years when the Institute gained more understanding of and commitment to dissemination. "RDx was started largely for political reasons," Hutchins says. "I saw us losing this dissemination capacity and I thought that in a few years, things would come full cycle and we'd wish we had it back again. So the RDx was a mechanism for holding onto that capacity." He says he developed "a lot of rhetoric" about what the program could do, but "nobody had a lot of faith in the specifics of that rhetoric. It was a kind of holding action."

Some laboratory and center personnel are skeptical about even this apparently candid version of what underlay the program's rhetoric. It was pursuit of Hutchins' own budget-building

interests, not primarily a concern about vanishing dissemination capacity, that animated Hutchins' initiative, they say.³³ They note that there was virtually no money for program expansion other than the "Lab and Center pot" created by CEDaR lobbying in the Congress.

This skepticism -- even cynicism -- about Hutchins' motives is somewhat surprising in light of the approach which Hutchins and Associate Director for Dissemination Senta Raizen took to the development of the Research and Development Exchange. During the winter of 1975-76, they visited a large number of CEDaR institutions to ask how the Labs and Centers might profitably be involved in the Institute's dissemination program. Further, drafts of the Request for Proposal were shared informally with Lab and Center officials as it took shape. The RFP called for a "sheltered competition" among Labs and Centers: no other organizations were permitted to offer proposals. And finally, the RFP itself stressed the tentativeness of the program it outlined. Repeatedly, it asserted SPSP's determination to make this a collaboratively planned, "emergent" effort. The choice of a collaborative approach reflected not only Hutchins' uncertainty about precisely how the program should operate but also his belief that people in the Labs and Centers could contribute at least as much as NIE staff to the creation of an effective program.

The Original Conception: An "R&D Dissemination and Feedforward System"

Whatever the political factors and the motivations that shaped it, the Request for Proposal issued in July of 1976 was an interesting and puzzling document. The R&D Dissemination and Feedforward System, it announced, was directed toward three broad system objectives:

1. making education R&D outcomes more accessible to potential consumers;
2. improving the quality and availability of consumer information on: (1) R&D products and (2) research and policy interpretations to help make education consumers more aware of their choices; and
3. improving educators' capabilities to make rational decisions to select and use R&D outcomes available to them.³⁴

As a rationale for pursuing these objectives, the RFP invoked a report prepared for NIE's National Council on Educational Research by Roald Campbell and several other distinguished educators and researchers. As it happened, the report was principally concerned with the same mixed political and substantive issues that occasioned RDx -- NIE's "Lab & Center" policy. The specific

portion of the report quoted by Hutchins, however, concerned dissemination strategy:

Current approaches conceptualize the issue either in mechanical terms of how to "disseminate" from a national R&D bank, or exclusively in terms of local self-help. The former notion is full of substance (products, research findings, teacher guides, exemplary practices) but lacks any motivational basis. The latter is content-free and imbued with social-psychological assumptions about the nature of innovation and self-renewal. Our conclusion is that neither strategy alone will make much difference to education, and that they must be integrated. We are discouraged at the predominance of discussion in much of the field and in key parts of the Executive Branch outside NIE simply in terms of the mechanical model of dissemination.³⁵

Rhetorically, then, the RFP sounded again a theme sounded in the R&D utilization program: the need to integrate local problem-solving assistance with active dissemination of R&D products and consumer information on those products.

As we shall see, however, not far below the rhetoric of integration, the RFP was decidedly combative. While explaining the need for improved access, the document takes a slap at Local Problem Solving thinking; and the portions that deal with improving local capabilities are generally weak and poorly focused. By contrast, the sections on accessibility and consumer information are more carefully crafted.

Improved Accessibility

Numerous R&D outcomes that would be valuable to the schools are underutilized because they are not readily accessible, the RFP argued. Yet, it noted, the utility of R&D for school problem solving is sometimes questioned on at least two grounds. First, some skeptics argue that "externally developed ideas and products will not or cannot be used by local schools. Such arguments assume that local requirements for 'ownership' and incentives for change militate against the use of externally developed R&D products and outcomes."³⁶

Countering, the RFP claimed that, "Education is slowly but surely accepting technological change." Furthermore, there was already "a long tradition of buying and using commercial materials developed externally -- some of which are R&D products." The difficulty is not that schools refuse to use externally developed products, but that too few of those purchased by schools lack a sound basis in research and development. Commercial advertising and accessibility are simply overpowering evidence of effectiveness; to compete, R&D products must become at least as accessible as non-R&D products.

A "more important" basis on which the value of R&D products to schools is sometimes questioned has to do with the merits of the products themselves: "It is not difficult to conclude that there is little persuasive evidence that existing R&D products and outcomes are a solution to major, current problems," the RFP concedes. Yet even if R&D products' evidence of effectiveness is questionable, they are probably better than the alternative -- "non-R&D products."

So a major problem is that the products just aren't readily accessible. Only 44% of NIE's products are available from commercial publishers or from the people who developed them. NIE-produced instructional materials, for example, are quite commonly available only in microfiche, if at all. Microfiche may be appropriate for research reports, but not for materials meant for student or teacher use.

The inaccessibility of many NIE products is attributable in large measure to an excess of free enterprise. In education, products are generally marketed individually by publishers who hope to make a profit on them. This results in a chaotic, inefficient situation in which many separate publishers or distributors put out competing products, many of which are neither produced nor "validated" through R&D. To make matters worse, "it is less appropriate to rely on this advocacy approach for dissemination of R&D outcomes than for other outcomes because R&D producers are generally not equipped, interested in, or funded to do advocacy dissemination."³⁷

The proposed "R&D Dissemination and Feedforward System" will help correct the situation by improving the accessibility of R&D products and by making syntheses of information on R&D products available -- the consumer information discussed in the next subsection of this chapter.

With respect to the accessibility objective, the proposed system will concentrate on "high quality thin market R&D outcomes" and on "NIE-sponsored outcomes." "Thin market" materials are those for which the market is insufficient to attract commercial activity; at least without a subsidy of some sort. In addition, the proposed system will collect information from consumers concerning the problems they face and the needs they have for R&D, and this will be "fed forward" to producers of R&D outcomes. And finally, through training of dissemination and R&D personnel, the system will share the results of research on the processes of development, dissemination, and implementation.

Improving Consumer Information

Continuing the same theme, the RFP laments that, "Rather than having systematic access to comparable outcomes in order to choose those most appropriate to local requirements, the school decision-maker is subject to the serendipitous effects of which salesperson arrives at the office door first."³⁸ And even if

local practitioners do amass information on the full array of products available, the sheer profusion of alternatives overwhelms rational choice. "For example," the RFP notes, "California recently reviewed over 2,000 reading products for state adoption."

Neither the kind of information available on individual products nor the teacher's situation makes things any easier. Product information is generally limited to advertising and sales presentations "which generally highlight and possibly exaggerate positive features of a product and underplay its weaknesses." Equally unreliable is "subjective information from other users." As for the teacher, he or she has little time -- about 1% of professional time -- to sort through the morass and make wise choices.

It is argued that these conditions cry out for a program of consumer information that presents systematically, economically, and reliably information on the range of products available to solve problems confronting educators.

By putting together information on products' actual evidence of effectiveness, arraying the information to permit easy comparison, and distributing it actively, the program will "educate the consumer . . . to ask for comparable information about other products" In addition to this active effort, the program may construct a "passive consumer information mechanism" -- an ERIC-compatible product information system.

In passing, the RFP notes that "the failure of a product to meet the advanced requirements of the R&D community does not mean it would have no utility to a school for which it might be a considerable advancement in practice. Only in cases of demonstrable hazard or potential harm might such knowledge be withheld."³⁹ The clear implication is that R&D expertise has outrun practice by far and that this cultural lag or backwardness among practitioners must be corrected through dissemination.

Improving Capabilities for Rational Decision Making

While improved accessibility and consumer information will help, the RFP says, they are not sufficient. Educators need to learn how ". . . to select and use R&D outcomes rationally instead of reactively, defensively, and opportunistically." Included here -- somewhat puzzlingly -- is an argument that R&D personnel with dissemination responsibility are not functioning so competently, either, and that syntheses of research on dissemination and training in dissemination are also needed. Precisely how this need relates to the need for more rational decision making by local educators is not made explicit.

Nor is the section of the RFP that describes activities addressing the need for improved capabilities for decision making particularly well-developed. It suggests that the program "will identify and make available consumer training materials and

decision tools such as product rating forms."40 These training materials would be used by "intermediaries" or linkers, who would themselves receive training directly from the proposed program.

Dissemination, Training, and Feedforward

Across all three objectives -- accessibility, consumer information, and rational decision making -- the RFP calls for three different types of activity: dissemination, "feedforward," and training. What is meant by "dissemination" should be reasonably clear from the foregoing sections, but the latter two types of activity want a little more discussion.

"Feedforward" as a term if not as an idea is unique to the R&D Exchange. Essentially the notion is that the flow between R&D and practice should go in both directions, should be an exchange of needs, and information, not simply a transfer of products from R&D to practice. The term is variously defined in program documents, but in the RFP at least, it includes the "forwarding" of innovations and ideas developed by practitioners into the R&D system, as well as the communication of practitioners' needs and problems to researchers and developers. The whole idea implies a degree of equality between practitioners and researchers. Practitioners are seen as quite capable of generating good ideas, themselves. And it is implied that researchers should orient themselves to the needs of practitioners: research as the servant of practice, not its master. Yet, other sections of the RFP call into question how deeply or centrally this view is held -- the "advanced requirements of the R&D community" are contrasted with the laggardly state of practice. We shall see how the feedforward idea fared as the program took shape.

The projected training activities were intended to absorb an existing NIE-funded "Dissemination and Linking Agent Training Project" and were to be directed to dissemination personnel in state education agencies, intermediate agencies, and other organizations already engaged in dissemination activities. As we shall see, the whole relationship between the proposed system and the network of dissemination agencies already in place would soon become a hot political issue for SPSP.

The Organizational Form of the System

The new program for dissemination and feedforward was envisioned as a system composed of elements of two types: national function contractors and regional information exchanges. National functions were to include system coordination, development of consumer information on R&D products, development of research and policy interpretations, "data management," and training for dissemination and utilization.

Developing research and policy interpretations was seen as the complement to consumer information on R&D products; rather than examining "products," this contractor would synthesize research reports and articles, analyze important education policy questions, and bring existing research to bear on these questions.

"Data management" was to include such activities as designing "a strategy for collecting management information on NIE-sponsored development and research outcomes from R&D producers," developing "instruments, guidelines, and procedures to collect baseline and feedforward information from consumers," and developing "procedures to identify, piggyback on, and share data on educational R&D outcomes and consumer needs with groups external to this system." (The specification of these activities typifies the heavily procedural orientation of the RFP, an orientation that was consistent with the proposed collaborative development of the system but which nonetheless makes the operational purpose of the system difficult to grasp.)

Regional Information Exchanges would mediate between the national function contractors and a network of SEAs, intermediate service agencies, and others which in turn would serve local districts. There were also some plans to serve LEAs directly, both through dissemination and by soliciting ideas and needs to be "fed forward" through the system. Eventually, the RFP projected, there would be ten Regional Information Exchanges, one in each DHEW region. Initially, however, only four would be funded.

In sum, the program would create a very complex, layered set of organizational arrangements spanning the entire intergovernmental system of education. The laboratories and centers at the heart of it all would help plan the particulars of its operation collaboratively, intricately fitting the separate elements together to make a well-articulated system. SPSP would simply be the principal federal partner in this joint venture.

The SEAs Respond

Even before SPSP could issue the final version of the RFP for the new "dissemination and feedforward system," SEA dissemination personnel had expressed very strong objections to what some of them saw as a treacherous attempt by NIE to by-pass the states once more, thus reviving a battle they thought they had already won when the Institute agreed to fund the State Dissemination Capacity Building Program.⁴¹

Hutchins and Dissemination and Resources Group Associate Director Senta Raizen found it necessary to meet with directors of several State Dissemination Capacity Building projects and other SEA representatives to reassure them concerning NIE's intentions. Raizen recalls these meetings as "quite heated" at times.⁴²

At least one other NIE official associated with the new program in its early days suspected NIE staff in the Capacity Building Program of having fueled these fires, a suspicion that may say more about relations between the two parts of the Dissemination and Resources Group than about actual events.

At any rate, the understanding reached by SPSPD with the representatives of the states was that the new program would support and work through state education agencies rather than competing with them. By the time the final Request for Proposal was issued, this understanding was pretty well established, but some residual mentions of direct connections with LEAs did find their way into that document and a certain amount of distrust lingered well into the early days of the program.

It appears that SPSPD's reassurance to the states amounted to a substantial revision of program direction, not simply a clarification of the original intent. It is clear that Hutchins won the dollars to initiate the program at a time when the top leadership of the Institute was looking for more aggressive ways to get its products out and into use. The Congress needed to be convinced that NIE cared about improving schools, not solely about funding research of scholarly interest. And the main reason for Hutchins' recruitment to NIE was his commitment to activist approaches. Hutchins himself says that his original notion ran more toward direct contact with local districts.

So, here was a program sold to the Institute's leadership as an activist alternative to the State Capacity Building Program, which was perceived to be too generalist and passive in orientation. Yet even before the new program could be funded, it was being forced into the role of a support and back-up system for the very SEA projects that were seen as insufficiently aggressive in getting NIE's products out. In effect, NIE was wrestling with itself. The Institute needed to garner SEA support for its cause in the Congress -- or at least to neutralize SEA opposition -- and at the same time, the Institute needed to mount an energetic effort to get its products into local schools. By the time the RFP was issued, the former impulse had shown itself more powerful.

Cooperative Planning

The initial contracts for what come to be known as the Research and Development Exchange commenced in October of 1976 and were intended to run for only five months. Early activity was restricted to planning. Following upon this planning period was a nine-month period of "feasibility activities" and continued planning. It was not until December of 1977 that the system "went operational." The extended planning process was necessitated by Hutchins' and his associates' decision to make the RDx a collaboratively developed program.

An official of one laboratory that won a contract later recalled his puzzlement about the RFP and his assessment of the planning that followed. "We really couldn't figure out what they wanted these Regional Exchanges to do," he said. "After the awards were made, I asked Larry (Hutchins) that question directly. He said he thought the people who won would get together with the NIE people and figure out what it made sense to do. That seemed reasonable enough, actually, but it hasn't really worked out that way."⁴³

Overall, there appears to have been a striking discrepancy between NIE officials' and many RDx contractors' perceptions of the "cooperative planning" process. In interviews, NIE officials recalled interesting, productive meetings, but several laboratory participants emphasized their puzzlement and impatience about the process. One Lab participant recalled a great deal of negotiation about turf issues, such as whether "national function" contractors could supply any services directly to local clients, to the exclusion of more "substantive" issues.

A veteran of the dissemination scene and observer of RDx planning saw a split develop between NIE and the contractors. "The Lab people developed a kind of code language they would use in meetings -- sort of like prisoners who only have to call out one word of a common joke to get everybody laughing at the guards." Not all Lab people took a negative view of the process; nor has the split ever meant a breakdown in operations. But Hutchins is the first to concede that his hopes for cooperative planning have not been fully realized.

To some degree, the preoccupation with issues of turf, roles, procedures, and institutional interrelationships was built into the historical situation. A very direct, goal-oriented approach was frustrated by the states' insistence that any NIE dissemination program should work through them rather than with LEAs directly. This focused attention on the program's relationship to the rest of the intergovernmental system. Next, Hutchins and his colleagues had specified a number of separate functions to be performed and appear to have assumed that the best way to effect their performance was to allocate each to a separate contract. The tendency to distribute functions in this way was probably reinforced or even inspired by the need to give some work to as many laboratories as was feasible. Third, although there were a large number of separate components, they were supposed to assemble themselves into an intricate web of reciprocities and function as a system.

The difficulties of integrating the components were heightened by the immediate institutional context in which each RDx contractor was situated. One observer explained the dynamics of the program by noting that RDx contractors, particularly Regional Exchanges, have three major audiences: (1) the top management of their own laboratories, which may be preoccupied with building or maintaining political support within the region, (2) clients in

the region, and (3) NIE. In many cases, the first two influence priorities and policies far more than does NIE.

Thus, RDx contractors' orientation, mode of organization, and services are highly variable. Even within laboratories, there is considerable variation in the services provided to the state education agencies in the region. This variation is dictated more by laboratories' social ecology than by central direction from NIE. As all the laboratory personnel interviewed confirmed, the RDx has never become a tightly articulated system.

Complicating the process was a tendency to produce thickets of theorizing and jargon which meeting participants could spend days wandering around in. Nearly all the laboratory staff members interviewed for this report recalled the papers introduced during the first year's meetings with a mixture of frustration and bewilderment. This tendency to complicate things and build elaborate theories that confuse rather than clarify matters appears endemic to the dissemination field. It may represent an attempt to put dissemination on an equal footing with the researchers who surround disseminators. Certainly, dissemination suffers in other respects from a low status within the R&D community.

By December of 1978, one year after having "gone operational," the Research and Development Exchange consisted of seven Regional Exchanges and four national function contractors. The latter four were performing most of the functions envisioned in the Request for Proposals, but they had been reorganized to produce the following array:

- A Linkage Training Service provides training, consultation on training, and other related support for individual responsible for dissemination activities in their state, service area, or school district.
- An R&D Interpretations Service is experimenting with transforming R&D-based knowledge, initially in the basic skills areas, into forms that can be used more readily by educational practitioners. This includes identifying existing interpretive literature. The intent is to provide information that will help educators make choices among an array of materials and practices.
- A Resource and Referral Service is building a data bank of available information resources. Included will be data about organizations and people who produce, are knowledgeable about, or disseminate R&D outcomes in the basic skills and competency-based education areas.
- A System Support Service facilitates the operation of the total R&D Exchange, including coordinating the efforts to inform the R&D community of practitioners' reactions and needs.⁴⁴

In addition to the seven operational Regional Exchanges, two more were in the planning stages -- one for the Southeast and one for the New England states and New York. In both cases, the planners were almost exclusively from state education agencies. In fact, the planning grant in each case was held by an individual SEA on behalf of a consortium of SEAs. Neither of the two regions planning new Regional Exchanges had regional laboratories of their own, though several Southern states received services from Appalachian Educational Laboratory in Charleston, West Virginia. By summer of 1981, both new Regional Exchanges had "gone operational."

In the Spring of 1981, a Request for Proposal was released for a long-planned study of NIE's "General Purpose Dissemination Assistance Programs," including the Research and Development Exchange. Late in the summer, the contract for the study was awarded to Abt Associates. Many of the key staff for the RDx study also played key roles in the previously reported study of the R&D Utilization Program.

Obviously, not even the most preliminary of results are yet available. So it is impossible to assess with confidence the progress which RDx has made toward its original goals. But to convey some sense of how things have worked out in at least one part of the program, the next section offers a brief sketch of the Regional Exchange in one laboratory. It describes not only what goes on in the Regional Exchange itself, but also how other parts of the RDx "system" look from the vantage point of one Regional Exchange.

The View from the Regional Exchange at Research for Better Schools

Research for Better Schools (RBS), located in Philadelphia, is the regional laboratory for Pennsylvania, New Jersey, and Delaware. (Its RDx also serves the state of Maryland.) Its Regional Exchange was among the first four to receive planning awards in October of 1976. In fact, Richard "Skip" McCann, Director of Dissemination at RBS, was centrally involved in the discussions with SPSP staff that led to the creation of the Research and Development Exchange.

McCann set the context for his description of the RBS Regional Exchange by recalling that he was recruited to the lab by then-Director Robert Scanlon in 1974.⁴⁵ McCann's long-term responsibility, Scanlon told him, would be to help strengthen the laboratory's relationships and work with state, intermediate, and local education agencies within the region. Through its "program purchase" policy, NIE had focused the lab's attention on national problems and issues. McCann, who had been in a key position at USOE when the laboratories were created, shared Scanlon's belief that the long-term survival of the laboratories depended on their ability to build a political constituency that would support them "on the Hill."

Another important background factor that conditioned the development of RBS' Regional Exchange, McCann says, was the lab's experience with two prior programs. The first was an effort by the lab to disseminate Individually Prescribed Instruction, which had been developed by RBS' sister institution, Learning Research and Development Center, a USOE-initiated R&D center located in Pittsburgh. Many schools had adopted IPI for the wrong reasons, or without any clear reasons, McCann says, and therefore implementation was spotty and halting. To remedy this sort of poorly thought-out adoption of externally developed innovations, Research for Better Schools had undertaken the Administering for Change program. Administering for Change developed strategies for "rational planning" and for managing innovation. Several other laboratories had launched parallel programs. Through the development work and especially the field testing of Administering for Change, people in the lab learned more about dissemination, planning, and implementation. And they also developed an enlarged network of contacts with local school districts.

Partly as a result of these experiences, McCann says, RBS' proposal to establish a Regional Exchange "quarreled with many of the assumptions" in the RFP. "We just thought that the emphasis on access wasn't realistic. Simple access wasn't sufficient. The RFP just didn't reflect an understanding of the real difficulties involved in implementing a new idea in the schools."

Another difficulty with the original plans for the program was that NIE appeared not to "recognize all the actors that had already grown up in the dissemination area within a region. They tended to be casual about that. And NIE still has difficulty recognizing the variations that it's necessary to make from state to state."

In order to build recognition of cross-state variation into its operations, RBS assigned a single person to be responsible for all its operations in and with each state. The balance of the approximately nine full-time equivalents available to the Regional Exchange are distributed among "content-specific" developers or researchers all across the laboratory. Managing the tension between a client orientation and a subject matter or substantive orientation is a constant concern for McCann.

To illustrate how this has worked with one state, McCann chose the case of the Rx's role in helping to develop Pennsylvania's School Improvement Program. PSIP is the central programmatic initiative of Pennsylvania Secretary of Education Robert Scanlon -- formerly Director of Research for Better Schools. PSIP, McCann says, is built around two elements already in place when Scanlon took office in 1978, the Educational Quality Assessment Program and the long-range planning process. Educational Quality Assessment conducted annual tests of students at selected grade levels, in specified subject matter or skill areas. EQA was voluntary, but all districts in the state except for Philadelphia, Pittsburgh, and a handful of others had joined the program.

The other element which Scanlon inherited was a long-range planning process which required districts to submit periodic plans to the SEA. When Scanlon came in, the process was focused largely on enrollment, physical plant, and the like. Although it created some difficulties for him within the SEA, Scanlon and his top management determined to shift the focus of long-range planning away from logistics and onto educational program. At the same time, the decision was made to remove the focus of long-range planning from the district to the individual school level. The district would provide a "support system" for individual schools and would aggregate the plans across schools. Each school would use feedback from the Educational Quality Assessment as one basis for specifying priorities for improvement. To formalize its participation in the voluntary program, the district would "register" with the SEA; registration imposed only an obligation to document actual use of the long-range plan submitted to the state. Previously, only submission of a plan, not documented implementation, had been required.

At the school level, PSIP specified neither the structure (e.g., parent-teacher-administrator council) nor the process (e.g., "rational" problem-solving cycle) for development and implementation of long-range plans. That was left to the discretion of individual schools and districts. The only instrument to ensure that planning and implementation did in fact occur was the network of technical assistance teams initiated under the PSIP banner. For each area of the state, there would be a technical assistance team drawing members from the SEA, from the intermediate unit serving the area, and from the state-supported higher education institution in the area. Little if any new money was available for local districts or for the institutions contributing to the technical assistance teams. (Scanlon had been appointed by Richard Thornburg, a "no nonsense" Republican governor.)

According to McCann, he and Ed Patrick, the Regional Exchange representative for Pennsylvania, became involved very early in the planning of the Pennsylvania School Improvement Program. McCann believes they have contributed to PSIP in three main ways. The first has been to "point out some areas where R&D suggests it would be worthwhile for districts to focus their attention." McCann says there were about a half-dozen broad substantive findings which he felt that PSIP should call to districts' attention, such as "the time on task thing" -- a series of studies showing a link between achievement and the actual amount of time during which students are actively engaged in learning tasks. It was important to attend not only to change process issues, but also to what McCann persistently refers to as "message," meaning the content of what is disseminated. The implication is that too much attention to process -- "the dissemination process," "the implementation process," "the problem-solving process" -- would drain both PSIP and the Regional Exchange of the new substance they were supposed to bring to education.

The second Regional Exchange contribution to planning PSIP, McCann says, was to help SEA officials "keep a sense of realism about what they can expect from a building staff." A major threat in this area was the proliferation of paperwork requirements. He urged the PSIP creators to keep paper plans to a minimum and to "let documentation carry the weight." And to the extent possible, both plans and documentation of the plans' implementation should grow out of "the natural rhythm of the district." That is, they should rely on the districts' own budgetary and review cycles to generate most of the necessary paperwork.

The third area where the RBS Regional Exchange contributed to the development of PSIP was in "building the technical assistance structure." Assembling the teams that would provide technical assistance to schools involved a host of questions, all of which had to be addressed within the constraints of existing resources. No new staff could be hired at any level. Within the SEA itself, this meant that good candidates for the technical assistance jobs had to be identified within existing programs, then freed up for at least part of their time, and in many cases, retrained as change-support generalists. There was also the question of who would take the lead within each TA team -- the SEA rep, the intermediate unit member, or the person from the higher education institution? (This was left to vary among teams; the strongest person for the role wouldn't always come from the SEA.)

McCann offered some intriguing observations on the effects of linking the dissemination and assistance aspects of PSIP with regulatory or quasi-regulatory functions of the SEA, such as the Educational Quality Assessment program and the mandated long-range planning process. The twelve competency areas specified by the SEA as priorities and operationalized in the EQA testing program define common goals across virtually all districts in the state. Of course, EQA results will focus attention on different competency areas in different districts, but there is a limited set of goals and objectives which tend to shape schools' priorities.

As a result, research information services such as RISE, located in the Montgomery County Intermediate Unit but serving a state-wide network of intermediate service units, find that the requests they get are less scattered and random. Instead, the great majority of requests relate to one of the EQA competency areas. Thus, RISE Director Richard Brickley can structure his files around the EQA competencies and can prepare special packages for various constellations of objectives within each area. Brickley confirms McCann's observation and adds that PSIP has increased the total demand for his services.⁴⁶ Brickley also believes that PSIP will help support active utilization of the research information his and other intermediate units provide.

In addition, McCann says, Research for Better Schools has begun to undertake research and development in EQA areas where the existing research base is deficient or in which the research has not been fashioned into a form useful for practitioners. That is, practitioners' requests for R&D related to certain EQA objectives are actually shaping the laboratory's agenda for research.

This represents one of a handful of examples of "feedforward" cited by R&D Exchange personnel interviewed for this study, all of whom agreed that the feedforward on the grand scale envisioned by Hutchins and his colleagues has not materialized. In general, Regional Exchange personnel -- both at NIE and in the Labs -- agree that the program has not accomplished a great deal in the "feedforward" area. The RFP contemplated a complex, interlocking network through which formal needs assessments by local, intermediate, and state education agencies would be aggregated and integrated with the Labs' own formal and informal assessments, which would in turn be forwarded to NIE to guide the Institute's planning process. One Regional Exchange director remarked that NIE had never shown much interest in receiving input from the laboratories regarding its agenda for research. And the same veteran observer of the RDx system quoted earlier pointed out that because of dissemination's relatively low status within individual laboratories, RDx projects generally have minimal influence over the research agendas of their own institutions. So Research for Better Schools may be an exception in this area. If so, the exceptional opportunity for "feedforward" would appear to derive partly from the clear and well-institutionalized goals and tests within one of the lab's client states.

Over the long run, McCann believes, PSIP will effect a fundamental change in the "mind set" of local districts. He believes that many elements of "rational management" -- such as an "outcomes orientation," "systematic planning," "use of empirical data in planning for improvement," and "consideration of alternatives" -- will be institutionalized in districts' behavior within approximately ten years, or two more rounds of the long range planning process.

If McCann is correct -- and it must be emphasized that no thorough study to check these assertions has been made -- by providing the SEA with assistance grounded in recent research on implementation and change in education, his Regional Exchange will have contributed significantly to the achievement of one of the RDx goals specified in the original RFP for the program: "improving educators' capabilities to make rational decisions to select and use R&D outcomes available to them."

The experience of other NIE-sponsored programs, such as the Urban Sites/DTA project described in Chapter 4 and the R&D Utilization Program discussed in the first half of the present chapter, suggest that effecting such a fundamental change in schools' organizational behavior is a very difficult matter indeed. By working through the Pennsylvania School Improvement Program, the

RBS Regional Exchange does have the advantage of coordination with other SEA initiatives, including two which add quasi-regulatory leverage to PSIP's technical assistance component. So, unlike Urban Sites/DTA and the R&D Utilization program, this effort would not rely solely on assistance to bring about change in schools' organizational behavior.

Yet, given the tight resource constraints which the Scanlon administration must accept as a fact of life, it seems doubtful that the PSIP technical assistance teams will be able to provide anything like the intensive, sustained assistance which characterized the Urban Sites or the R&D Utilization projects. Nor are the school level structures (e.g., parent-teacher-administrator councils) or procedures (e.g., the rational problem-solving cycle) so well-defined as those employed in RDU.

So the question here is whether mild regulation combined with modest assistance can accomplish what intensive technical assistance alone could not. Past experience suggests that a combination of stronger regulation and vigorous assistance would have a better chance, but the PSIP case certainly bears watching.

From an examination of the work of RBS' Regional Exchange in Pennsylvania, McCann turned to a discussion of relationships with other elements of the RDx. He remarked first on the changing relationship between the Regional Exchange and the R&D Interpretation Service (RDIS), located at the Central Midwestern Regional Educational Laboratory (CEMREL) in St. Louis. An early major project undertaken by the R&D Interpretation Service was to develop a handbook entitled Research Within Reach: A Research-Guided Response to Concerns of Reading Educators.⁴⁷ In a Foreword to the handbook, RDIS Director Linda Reed notes that although more and more syntheses of research on reading are becoming available, these syntheses generally take the findings of researchers as their starting point without asking whether these findings relate in any meaningful way to the puzzles and concerns which teachers are actually experiencing. Reversing the usual sequence, "RDIS began by interviewing teachers, supervisors, and administrators to discover substantive questions they wanted answered. These questions were then taken to carefully selected members of the research community. The information gathered from researchers was summarized and interpreted to provide the best answers research can currently offer." The resulting answers were then reviewed for accuracy and completeness by a larger group of researchers.

Thus, Research Within Reach does not merely summarize research on reading, but brings it to bear on questions commonly asked by practitioners. The handbook represents, in a sense, another variant on the "feedforward" idea. That is, practitioners were asked to pose their own questions, and these set the agenda for synthesis work by the RDIS staff. Again, not so elaborate as the original vision, but certainly consistent with the underlying notion.

Research Within Reach: Reading was extremely well-received. In addition to copies printed at NIE expense and distributed through the R&D Exchange, the International Reading Association printed 6,000 copies for distribution to its membership, and by April of 1980, over twenty thousand copies had been distributed with support from several organizations. RDIS promptly embarked on a similar project in mathematics, the results of which were published in separate leaflets rather than as a single handbook.

McCann says that both the reading and math syntheses were conceived and carried out with little involvement of the other elements of the RDx "system," but that the work now under way in oral and written communication has been a genuinely cooperative effort among the Regional Exchanges, the RDIS, and the other national function contractors. RDIS Director Linda Reed confirms this. She says she made a very deliberate effort to involve Regional Exchange directors in developing the new products.⁴⁸ A primary goal of hers is to "create a sense of ownership of RDIS." So it appears that with RDIS, at least, some of the connections necessary to move RDx more in the direction of a system rather than an array of discrete projects are being made.

McCann is similarly positive about the Resource and Referral Service (RRS) at the Center for Vocational Education, Ohio State University. The Resource and Referral Service publishes "mini-lists" of R&D on hot topics, puts together more extensive bibliographies and lists of assistance sources, and keeps track of who in the country is working on what topic and problems. McCann portrays the RRS as very responsive to his staff's requests for help in locating research and expertise related to the Regional Exchange clients' needs.

The Dissemination Support Service (DDS) (formerly the Linkage Training Service) and the System Support Service get more mixed reviews. Their fundamental problem, McCann says, is that they are too "process-focused." They lack the "meat," the "message focus" of the R&D Interpretation Service and the Resource and Referral Service. Some DSS seminars for R&D Exchange personnel are good, such as one on workshop design. Participants brought real design problems to the seminar and received help in solving them from training experts and from other participants. The "networking" across projects which this kind of seminar promotes is quite useful. But, according to McCann, the quality of the sessions is quite variable. The System Support Service suffers from a dual mandate to provide certain management support on the one hand, and to document the system's activities on the other. In McCann's view, these functions are "never very exciting" individually, and quite difficult to perform successfully when linked together.

McCann's final observations concerned the influence of his laboratory's and NIE's renewed interest in "regionality" upon the Research and Development Exchange. As noted earlier, McCann had been recruited to RBS in 1974 partly to improve the laboratory's relationships with SEAs and other clients within the region. By

1976, lobbying by the Council for Educational Research and Development, an organization of the regional laboratories and R&D centers, had produced Congressional appropriations language directing the Institute to provide "R&D services" to regions of the country not adequately served by an existing laboratory. A review of laboratories and centers undertaken during the transition from USOE to NIE in 1972, plus subsequent pursuit of a "program purchase" policy by NIE, had caused several labs to close, leaving several gaps in the system of regional laboratories. Now the Congress was urging the Institute to correct these geographical inequities. This pressure from the Congress led to a revival of interest in "regionality" as a mode of providing R&D closely related to problems identified by practitioners, a mode appropriate for existing laboratories as well as any new ones that would be established at Congressional insistence. By 1978 related pressure from the Congress and the report of a Congressionally mandated panel on NIE's "Lab and Center" policy led to the establishment of "long term agreements" between NIE and the Labs and Centers. The agreements assured relatively stable funding for five years and treated each laboratory or center as an integrated institution rather than a collection of separate purchased projects. In return, the regional laboratories agreed to an enhanced role in their governance and operations for SEAs and other important constituencies within their regions.

For the Exchange at RBS, McCann says, this chain of events meant integration into the laboratory's overall regional strategy. In fact, McCann expects the Exchange to lose its independent identity, slowly fading into the lab's "integrated strategy," a turn of events which he welcomes. Richard Elmendorf, the NIE official in charge of the R&D Exchange, foresaw these developments in a 1978 paper entitled "The Future of the Regional Exchange":

One way of looking at the development and future of the Regional Exchanges is to consider that they are part of a larger, long-term effort to have the labs become the regional resources that were envisioned when they were established in 1965-66. In that context, each Regional Exchange might be considered a small-scale trial of what a larger portion of its parent laboratory might become in time. It is quite possible, therefore, that over time the RDx system per se might wither away as each participating lab absorbed the philosophy and functions of its Regional Exchange project into a larger operation. This could mean that most of the internal service contractors and the national Advisory and Executive Committees (the system's appurtenances) would not be needed. What would remain (ideally) would be 7-10 individual labs with major portions of their total programs devoted to practitioner-client services. This appears to me to be a desirable ultimate goal, even though it is likely to mean that NIE funds will still be required to support what by then will be an "institutional function" instead of an R&D project.⁴⁹

As Elmendorf went on to point out, however, NIE itself had not decided what directions the R&D Exchange should take. He raised a host of questions concerning the Institute's intentions -- including whether NIE intends to support the system indefinitely or to relinquish both control and support to SEAs and other clients of the system -- but ended by saying of these policy decisions, "I leave this problem to NIE and lab policy makers."

Several of the laboratory directors to whom Elmendorf left the problem have never been particularly fond of the R&D Exchange program. These directors continue to favor Frank Chase's interpretation of the Labs' mission -- to make the link between research and development through major programs of systematic development, turning research into products immediately usable in the classroom and in other educational settings. They regard the RDx as too "service oriented," as part of an attempt by NIE to reduce their institutions to mere "regional service organizations" rather than major national R&D producers. Thus, particularly under the pressures of the Reagan administration's severe budget cuts, now threatening to destabilize what were thought to be stable five-year budgets from NIE, the R&D Exchange may become extremely vulnerable as Lab directors and boards decide where to make reductions in the overall programs.

Some Reflections on the Evolution of the R&D Exchange

The R&D Exchange is a fascinating example of the transformation of purpose, policy, and program which befalls many federal initiatives in education and in other fields characterized by complex intergovernmental connections. The program began when the Institute was forced by CEDaR lobbying to spend some seven million dollars more on Laboratories and Centers than it had plans for. NIE was also under pressure to show the Congress that the R&D it was supporting could actually solve problems confronting the schools -- or at least to demonstrate a commitment to such practical applications of R&D.

Thus, when School Practices and Service Division chief Larry Hutchins came forward with a proposal to establish a system that would help Institute leadership deal with both of the Congressional problems -- the CEDaR problem and the research-to-practice problem -- dollars were soon allocated for Hutchins' program. Hutchins, in turn, appears to have had his own three-part agenda. First, to make some contribution to solving both the substantive and political problems involved in getting research into practice. Second, to preserve what he saw as a dwindling Lab and Center capability for dissemination. And third, some say, to expand his own programmatic and budgetary empire.

As Hutchins began to "put together some rhetoric" to achieve these purposes, he turned to his staff, who had ideas of their own about what ought to be done in dissemination. To cite one example, a colleague of Hutchins with psychiatric training believed very deeply that teachers wanted and needed solid guidance from

research concerning the best ways to do their jobs, but that research was generally too scattered and diffuse to be of much help. Thus, syntheses of research were urgently required.⁵⁰ Another associate of Hutchins' held a similar belief that the chaotic array of R&D products which had been developed but not effectively disseminated should be collected and systematically presented through a program of consumer information.⁵¹ These strongly and sincerely held ideas found expression in the Request for Proposal for the program Hutchins had proposed for other reasons.

In turn, according to one well-placed observer of the system, the successful offerors in NIE's "sheltered competition" then brought with them to the ensuing "collaborative planning process" yet another set of purposes. That is, the directors of Regional Exchanges had at least three different audiences to satisfy: the top management of their own laboratories, clients within their region, and NIE. In addition, these directors had to work out relationships with the directors of the four "national function" contractors.

As a result, what had been envisioned as a unified program took different forms in different places, depending on the social ecology in that particular niche of the intergovernmental system. And as time went along, "regionality" renaissance in NIE and some labs threatened and promised to absorb the R&D Exchange into the fabric of the laboratories.

As the program evolved through time and across institutional contexts, what happened to the rhetorically stated goals of the program -- increased accessibility of R&D products, better consumer information, and more rational decision making at the local level? It is not yet possible to say for sure, but interviews with NIE officials and the RBS case do suggest some very tentative and partial answers. These are presented in the next section.

Problem, Strategy, and Assumptions in the Research and Development Exchange

Problem

The basic problems defined by the R&D Exchange are (1) the inaccessibility of R&D products in readily usable forms, (2) the difficulty of obtaining clear, comparable data on the profusion of products which are available, and (3) educators' inadequate skills to select and use R&D outcomes.

Strategy

The core strategy is to develop collaboratively with educational laboratories and centers a program to (1) publish "thin market" materials and other products not directly usable by practitioners, (2) provide R&D products related to common problems,

(3) synthesize research and provide comparably formatted information on R&D products, (4) improve disseminators' capabilities to help users make rational decisions, and (5) communicate practitioners' and policymakers' needs and ideas to producers of R&D.

Assumptions Regarding Conditions for Improvement

- that "while information about R&D outcomes is not itself a sufficient influence for educational improvement, it is necessary"
- that "non-R&D products" are generally inferior to "R&D products"
- that R&D products are losing out in a competition with non-R&D products principally because publishers' advertising and salespeople make non-R&D products and information about them more accessible than are R&D products and information about them -- and that readier access to the latter could reverse this situation
- that confusion due to conflicting findings, specialized language, and a focus on researchers' rather than practitioners' interests impedes research utilization and that a sustained program of synthesis and interpretation can remove this obstacle.

Commentary

The claim that R&D is necessary to improve practice, even if it is not sufficient to do so, appears relatively modest. In places, however, the RFP for the R&D Exchange goes even farther, conceding that improvements are probably possible without R&D and relegating R&D to the status of a helpful element, not a fully necessary one. There is certainly no hubris here, and probably little point in quarreling with this assumption.

Behind the R&D Exchange's "improving accessibility" objective, is an assumption that practitioners will choose whatever superficially attractive products come readily to hand, regardless of their true merits and that it is therefore essential to make R&D products at least as readily accessible as "non-R&D products." (Note the contrast with ERIC's assumption that practitioners would seek out research if only it were organized, indexed, and reproduced by an information system.) The picture that emerges here is of research and development in a losing competition with the commercial sector. R&D seems to stand for rationality while publishers stand only for slick advertising, sales, and profits.

To some degree, this way of stating the underlying rationale exaggerates the distrust of the commercial and corresponding high valuation of R&D which the program's framers harbored. But there

clearly was a belief in the superiority of products developed through R&D processes, a belief that commercial products, though less systematically developed and tested, are dominating the market, and a belief that delivering the practitioner from the thrall of commercialism is not merely a proper role for NIE, but an obligation for the Institute.

It is not clear on the basis of currently available evidence just how much the Exchange has done to improve access to R&D products, nor whether this has resulted in an increased market share for R&D. Neither is it clear to what degree the assumption of R&D products' superiority is warranted. One suspects commercial publishers would make a strong counter argument.

The argument that the research literature on many major problems is diffuse, apparently conflicting, and confusing to practitioners has considerable persuasiveness to anyone who has actually sought guidance from research. Also appealing is the idea that critical screening, careful synthesis, and translation into clear language would be helpful. The broad acclaim for the Research Within Reach products developed by the Exchange tends to support these ideas, although there is a big difference between liking good syntheses and actually using them to improve practice. Perhaps Abt Associates' current study of the R&D Exchange and other NIE "general purpose dissemination assistance" programs will produce empirical evidence on these points. At present, no such hard evidence exists.

Unfortunately, evidence concerning the "improving rationality" assumption is similarly scant. It is tempting to dismiss the notion that practitioners' selection and use of products is irrational.⁵² The idea smacks of elitism on the part of researchers. Yet, experience in and around schools does tend to confirm the capriciousness of many materials and equipment purchases. It is easy to produce a parade of anecdotes to substantiate the claim of "irrationality." Still, it really is not clear just how widespread this irrationality is, nor whether many apparently irrational purchases are actually irrational. That is, the fact that a choice is not made rationalistically -- through a systematic, deliberate process of seeking alternatives, comparing them carefully, evaluating the pros, cons, and tradeoffs, and so on -- does not necessarily mean that it is made irrationally -- or for no good reason.

What is both interesting and not elitist about the irrationality assumption is that RDx does not propose to "fix" practitioners, to imbue them with a deep and thoroughly different set of behavior patterns, so much as it proposes to provide them clear, readily compared information. The presumption seems to be that given good information, arranged in an orderly fashion, practitioners can choose rationally, and that it is time pressures and the bewilderment of the marketplace which make rational choices difficult without good "consumer information."

As for "feedforward," the evidence here is also slight, perhaps because RDx has not implemented the idea in anything like its original form. Despite its awkward name, the idea does appear to have an enduring appeal. It is embedded in Havelock's broad conception of "linkage" as exchange between user and resource systems. It was also espoused in the report of the Interstate Project on Dissemination. IPOD proposed that dissemination should be a two-way process, serving to communicate practitioners' needs, problems, ideas, and exemplary practices to "knowledge producers" as well as transmitting R&D results to practitioners.⁵³

Some modest varieties of "feedforward" are occurring in the R&D Exchange, even if the elaborate system originally envisioned by Larry Hutchins has not materialized. Perhaps an effort to identify and learn from such partial, hard-to-recognize instances of feedforward would produce some useful insights and open up and suggest ways in which "naturally occurring" feedforward might be enhanced.

Assumptions Regarding the System for Supplying Missing Conditions

- that the existing network of regional educational Laboratories and R&D Centers possesses unique capabilities to carry out the strategy
- that because the Laboratories and Centers possess substantial capabilities in this area, designing the program with them collaboratively is preferable to design solely by NIE officials
- that the Labs and Centers together with NIE can work out a well-articulated, integrated system for carrying out the requisite functions.

Commentary

The "political" origins of the R&D Exchange, recounted earlier in this chapter, help to explain why the principal macro-level assumptions underlying RDx were made. That is, Larry Hutchins saw the regional Laboratories' and R&D Centers' dissemination capabilities as important, even unique. Yet NIE's "program purchase" policy was eroding this capability. The Exchange was inspired in part by a desire to preserve the Labs' and Centers' dissemination cadre. To a substantial degree, RDx appears to have succeeded in preserving the capability. Whether the Labs' and Centers' staff was so crucial to NIE's dissemination effort as Hutchins believed is another matter. It does appear that the capability was quite substantial, and if the anecdotal evidence I have gathered is any guide -- which it may not be -- some parts of the RDx system have made significant contributions. Once again, however, a definitive assessment must await the results of the Abt Associates study currently under way.

What is clear is that the collaborative planning assumption was interestingly flawed. Flawed because RDx has not emerged as a tightly integrated system, but as a decentralized and positively opportunistic one. Nor has it fully realized many of the original objectives for the program, including the accessibility, consumer information, and feedforward objectives as they were originally understood. Nevertheless, the decision against detailed planning by the NIE staff did permit people in each participating institution to contribute useful ideas to the Exchange as a whole, to shape their own projects in reasonably fruitful ways, and to adapt their projects to conditions in their own regions and institutions. Further, although RDx may be less than -- or at least "other than" -- a tightly integrated system, it is also pretty clearly more than an assemblage of separate projects. RDx appears to have contributed significantly to communication among a set of institutions which NIE's competitive procedures policy had tended to isolate.

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CHAPTER SIX: REFLECTIONS ON DISSEMINATION AT NIE

The history of dissemination at NIE presented in the preceding chapters is best understood as part of a more general conflict which dominated the agency's early years -- a conflict which pitted the search for a new truth which would solve the problem of educating disadvantaged children against the political realities of the country's complex education system.

The people who originally conceived of NIE, White House Domestic Advisor Daniel P. Moynihan and his protege Chester Finn, concluded that the Johnson administration's Great Society programs for disadvantaged children had failed, thus disproving the ideas about child development and learning which underlay the programs. To solve the problem of educational inequality, what the nation needed was knowledge -- a fundamentally new, empirically tested theory of development and learning. USOE's Bureau of Research and the researchers it funded were not equal to the task. A new agency capable of attracting better researchers would be required.

To find the new truth, the agency would not only have to recruit "best minds" to think about the problem and research it, but would also have to maintain a steadfast focus on truth-seeking, resisting political pressures for quick results as distractions from or even as corruptions of the search. There may also have been an assumption that the new truth, once discovered, would compel belief and translation into practice simply by virtue of its manifest superiority to the old, clay-footed truth of the Great Society.

Because education is a field where compelling truths have proven hard to come by, because NIE was a politically weak agency in a politically contentious intergovernmental system, and because the Congress was impatient for observable results, the Moynihan-Finn vision of the dedicated search for a new truth was hard to sustain and impossible to realize. Contending centers of power pushed and tugged and even bullied the new agency. Neither the Congress nor the state education agencies nor the Labs and Centers, nor any others among the host of associations, interest groups, and organizations involved with education seemed to respect the Institute's commitment to finding a new truth that would settle once and for all the question of how to educate the disadvantaged.

Struggling to survive, about two years after the Institute was founded NIE's leaders began to search for ways to reduce the political pressures. Dissemination looked like a good way to show Congress that the agency was committed to solving problems and improving practice. Much of the funding for dissemination would also go to the main sources of negative lobbying -- the state education agencies and the Labs and Centers. So the truth-seeking agency was constrained to commit dissemination in order to save itself.

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This volume has told the story of what happened as a result. Albeit with twists and turns and backtracking along the way, the story led from a faith in research as the answer to educational problems toward an increasing reliance upon interpersonal assistance in problem-solving, with research playing a supporting role.

Well before NIE was created, the founders of ERIC had decided that R&D wasn't working because people couldn't get at it readily. We needed a system to collect, abstract, index, reproduce, and facilitate searching of the education research literature. If educators could easily find research reports and articles related to their problems, they would use them.

By the late sixties, even people associated with ERIC had concluded that the system hadn't produced the results they had expected. In addition to answering the question, "Why isn't research working?", they also had to answer the question, "Why isn't dissemination working?". Dissemination wasn't working, they concluded, because it was too passive. A more active effort to get research into the hands of practitioners was required. The Pilot State Dissemination Program, which supplemented passive information systems with "linking" by information specialists and field agents, was launched. To people close to the program, the in-person assistance provided by the field agents appeared to solve "the dissemination problem."

In 1972, however, NIE came upon the scene, and the new agency's leaders were not persuaded by the Pilot State Dissemination Program's results. They questioned the detachment and methodological rigor of the evaluation. They also had two other, very different explanations of why R&D didn't appear to be improving schools. First, the "better people" hypothesis already described: research wasn't working because it wasn't very good research. Second, some within the Institute were arguing, paradoxically, that dissemination wasn't the problem. Research wasn't improving practice because the schools themselves lacked a capability for self-examination and self-improvement. Research wouldn't help until schools' problem-solving capabilities -- their ability to reflect upon their own performance and use internal as well as external resources to attack problems thus revealed -- were upgraded. Researchers should be set to work on questions of schools' organizational and management processes. Otherwise, even if research did produce new answers to ancient questions of how people learn and how they may be taught, these new answers would never find their way into practice.

Accordingly, a series of action research projects designed to discover ways to improve schools' problem-solving capabilities was launched -- the Urban Sites/Documentation and Technical Assistance program. The study of the projects encountered such grave difficulties that it was terminated. Most people close to the projects agree, however, that the projects did not engender and leave behind enduring, generic problem-solving capabilities.

In parallel, the Local Problem Solving group had launched another program, this one also questioning the effectiveness of information-based dissemination systems but emphasizing individual teachers' professional development rather than schools' organizational capabilities. Teachers could develop deeper understandings and better skills through self-initiated learning from colleagues and from people whose mastery of research and familiarity with good practice enabled them to blend the two. Experience with this approach proved it promising, but the teachers' centers that embody it, as well as the Teachers' Center Exchange that supports them, remain vulnerable to fiscal cutbacks.

Meanwhile, Congressional pressure had led to the revival of ideas from the Pilot State Dissemination Program. The State Dissemination Capacity Building Program was launched. State Capacity Building shared the Pilot State Dissemination Program's thesis that some form of interpersonal linkage was necessary to make information-based dissemination work. It added the notion that a lack of coordination among the dissemination components of many federally sponsored programs was also reducing dissemination's effectiveness. While the program apparently did enable SEAs to build up their information bases, active "linkage" efforts approximating the intensity and depth of assistance provided by the Pilot State field agents appear to have been rare. Improvements in coordination among disparate dissemination activities also appear modest. And such new capabilities as have developed are reported even by sympathetic observers to be quite perishable, disappearing soon after NIE funds are withdrawn.

Other NIE dissemination officials anticipated that SEAs receiving Capacity Building grants would emphasize development of information bases and that in-person linking would be spread very thin in response to the demands of whole states. Further, these officials found themselves partly persuaded by the Local Problem Solving unit's arguments. To make dissemination effective, they believed, linking agents would have to help schools broaden participation in improvement efforts and use rational problem-solving processes. The Research and Development Utilization Program focused primarily on particular educational problems rather than generic organizational problem-solving capabilities. It stressed utilization of external R&D resources, but it did incorporate attention to problem-solving processes as an important element of research utilization.

The over-all verdict on the program seems to be that RDU made dissemination work. But ironically, there is some question whether it made R&D work. That is, the most successfully implemented and apparently beneficial innovations disseminated by the RDU program were actually "exemplary practices" developed by local educators and only "validated" through scientific R&D methods. Evaluators concluded that this did not result from defects in the R&D products, but from the lack of readily accessible training and assistance in their use. In contrast, the practitioners who developed exemplary practices had been funded

through the National Diffusion Network (a USOE-originated dissemination program) to teach adopters how to use them properly. This led to better perceived implementation and results.

Over the years there had been a slow drift away from a focus on research as the answer to educational problems. The definition of dissemination gradually broadened from improving the accessibility of research by establishing an information system, to synthesizing research and putting it into more usable forms, to interpersonal assistance in finding appropriate research, to assistance in selecting and using it, to improving the problem solving and research utilization capabilities of schools. What had been a mere instrument for getting research to practitioners had become a more and more comprehensive set of services to schools. The relative emphasis on the research being disseminated diminished as experience demonstrated how powerful were the characteristics not only of individual users but even more so of the social systems within which individual users were embedded.

By the time of the R&D Utilization Program, the balance had shifted to such a degree that the products of systematic R&D were subsidiary to the assistance provided to "users" of the R&D. In fact, when the R&D products were taken out entirely, and practitioner-developed practices were substituted, the school improvement process worked out better.

While trying to solve what had been construed as an ancillary problem -- the problem of how to get research into practice -- NIE backed into a partial solution of the larger problem: how to improve schools. The "unplanned variation experiment" in dissemination, resulting from a combination of political pressure and uncertainty about what constituted good dissemination, may actually be the most important experiment the Institute has carried out.

As a result of this "experiment," documented and analyzed by evaluations and studies of the contending dissemination programs, we know a good deal about dissemination. While "the dissemination problem" is one of those enduring problems that will never be fully resolved, we do know approximately what is required to get new educational practices into place in many classrooms. That is, we know that sustained assistance from "linkers" in (1) establishing participatory problem-solving groups, (2) defining and maintaining focus on a problem, (3) selecting or developing an appropriate innovation, (4) training teachers, and (5) troubleshooting during implementation can enable local educators to make changes which they perceive as beneficial.

We also know that passive dissemination systems are insufficient to bring about these same changes, but are useful bases from which to draw information about research, products of development, and exemplary practice. In addition, we know that focusing on problems experienced by people in schools is probably more effective than focusing directly upon schools' organizational

capabilities for self-improvement. While the organizational properties of schools and districts seem crucial in determining the fate of interventions to change classroom practice, these systemic characteristics prove resistant to change through interventions which rely on assistance alone, without a corresponding exercise of power to motivate and lay the structural conditions for change. Attending to organizational structures and processes in the course of addressing specific problems does seem helpful, however.

Obviously, there is still a great deal we do not know about change at the classroom, school, and district level. We do not know, for example, whether the rational, participatory problem-solving process employed in the RDU program is important for straightforward instrumental reasons or because of its value as a symbol of teachers' right to a say in school decisionmaking and of a careful, systematic approach to problems.¹ We do not know enough about how to solve the larger problems of school climate, school-community relations, and intercultural conflict -- the kinds of problems which most concerned the people who developed the Local Problem Solving program. Improved organizational capabilities for problem solving are probably even more crucial to success in addressing these broader concerns than to successful implementation of instructional innovations. Nor is it certain just how helpful are the syntheses and consumer information supplied by the Research and Development Exchange, although the widespread enthusiasm for Research Within Reach products is encouraging.

In one respect at least, what we know about dissemination at the classroom, district, and school levels applies as well to the complex inter-institutional systems through which dissemination assistance must be supplied. Over the history of NIE and its USOE predecessor, federal efforts at dissemination encountered over and over in deeper and broader ways the fact that organizations and people at other levels of the education system, like the heart, have a mind of their own.

First it became clear that most teachers, preoccupied with the unrelenting demands of keeping school and lacking a strong tradition of research utilization, would not seek out research and use it to change their own behavior. The Pilot State Dissemination Program and the Research and Development Utilization Program gave increased recognition to the reality of the practitioner, and to the organizational and political environment in which the practitioner was embedded. So the pragmatic effort to disseminate research about teaching and learning spun off important lessons about the complex institutional dynamics that determine classroom practice and organizational behavior in schools.

As the importance of local institutional factors became clearer, the Local Problem Solving Program sought to learn how to change them. But schools as organizations also had a mind of their own. Organizational structures and practices were held in place by

strong if invisible bonds -- values, norms, traditions, political pressures, and self-interests.

The NIE dissemination experiment suggests similar lessons at the state and federal levels. State education agencies' responses to NIE's State Dissemination Capacity Building Program appear to have been determined largely by institutional factors within each SEA and its environment. Attempts to understand implementation of the State Dissemination Capacity Building Program have already revealed a good deal about SEAs' own realities -- about the divergent forces acting upon them from the local, state, and federal levels, and how SEA leaders contend with these forces. Obviously, a good deal more remains to be learned.

The NIE dissemination experiment has also produced some lessons about the power and the workings of institutional factors at the federal level itself. In fact, this report has concerned itself as much with institutional dynamics at the federal level as with the dynamics of the systems through which research was to be disseminated. This volume's general argument has been that, faced with political pressures to spend more of its budget on dissemination yet uncertain about how dissemination might be carried out effectively, NIE responded with a form of organizational behavior which Corwin² has called "entrepreneurial bureaucracy." That is, articulate spokesmen for different strategies aggressively sold their theories to the agency's leadership and competed for dollars to support programs embodying their theories, all within a framework of governmental bureaucracy. The NIE leadership "bought" several theories and programs and, in turn, sold them to the Congress as evidence that NIE was indeed urgently concerned about improving practice.

In the course of implementing and reflecting upon these programs (through commissioned evaluations and other means), some within the Institute have developed a more and more sophisticated and realistic understanding of the intergovernmental system which determines educational practice in America. They have been forced to do so in spite of the Institute's conceivers' belief that what was needed to improve educational practice was a resolute effort by "best minds" to discover new truths about fundamental processes of learning and teaching.

Beyond the lessons about dissemination which can be learned from the six programs examined here, a broader lesson about the role of research in school improvement can also be learned: research appears to have only weak appeal for most educational practitioners and to lack the power to change practice deeply or rapidly enough to satisfy most educational reformers. Ironically, research suggests that research is not a very powerful instrument for school improvement. To compound the irony with paradox, research also suggests that "dissemination" -- defined to include interpersonal assistance in problem solving and using new practices influenced by research -- is more effective than the research being disseminated.

What does this lesson imply for an agency whose mandate includes both research and educational improvement? It seems to imply at least two different things. First, though research may not appeal to teachers and other local practitioners strongly enough for them to seek it out and use it to transform their own behavior, research does appear to serve a number of useful functions. For example, Weiss³ suggests some ways in which social sciences can help decision makers:

They provide (1) broad theoretical perspectives for organizing and making sense of complex social phenomena, such as functionalism, Marxism, and Keynesianism; (2) empirically based generalizations, of the sort compiled by Berelson and Steiner (1964) that seem to have fairly wide applicability -- although not without exceptions; (3) sets of concepts that serve to categorize events and processes in useful ways, e.g., social stratification, supply and demand, bureaucratic politics; (4) specific sets of findings . . .; and (5) facts, e.g., population counts, voting data.

Conspicuously absent from the list is rigorously verified truth with clear implications for action. As Weiss notes, "Social science does not yield a single uncompromised truth." Nor does it often point unequivocally to a specific course of action.

Cohen and Garet⁴ earlier reached similar conclusions and went on to propose viewing the research enterprise as a limited but useful part of continuing public discourse on public policy. More recently, Lindblom and Cohen⁵ deepened and expanded this view by defining a circumscribed role for social science knowledge within more powerful political, economic, and other social processes.

A 1978 National Academy of Sciences report⁶ on fundamental research in education argued that over time, ideas from research exert a deep and pervasive influence on the ways educators and policymakers view children, teaching, schools, and the role of education in society.

In sum, research seems to be helpful in subtler, more indirect, more limited ways over longer time spans than the creators of NIE had hoped. But as the political narrative presented in earlier chapters should make perfectly clear, voting scarce dollars to the Institute on the basis of such an argument probably requires more statesmanship, belief in the goodness of knowledge, or patience than most members of Congress are likely to evince.

This is where the second implication of NIE's dissemination experience comes in: to fulfill its school improvement mission within time horizons acceptable to politicians, policymakers, and the public, NIE must continue to support "dissemination" broadly defined, even while recognizing that assistance in solving problems with the aid of research is probably more useful to schools than is the research itself. An Institute clearly

concerned about helping schools, even through means other than research strictly defined, is politically more viable than an Institute committed solely to basic and policy research. Furthermore, basic and applied research probably have a better chance of surviving Congressional and executive branch skepticism within an improvement-oriented Institute than they do standing alone.

If the history of dissemination at NIE does in fact imply that the Institute should continue support for dissemination, one can only hope that the Institute's new leaders will draw on the experience of the last ten years for such guidance as it can provide -- accepting, of course, that political factors in their environment will powerfully shape their analysis and use of that experience.

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290 South Main Street, Andover, Massachusetts 01810